SOIL SURVEY OF

Talladega County, Alabama

United States Department of Agriculture
Soil Conservation Service and Forest Service
in cooperation with
Alabama Agricultural Experiment Station
and the
Alabama Department of Agriculture and Industries

Issued June 1974

Major fieldwork for this soil survey was done in the period 1966–68. Soil names and descriptions were approved in 1969. Unless otherwise indicated, statements in the publication refer to conditions in the county in 1968. This survey was made cooperatively by the Soil Conservation Service, the Forest Service, the Alabama Agricultural Experiment Station, and the Alabama Department of Agriculture and Industries. It is part of the technical assistance furnished to the Talladega County Soil and Water Conservation District.

Either enlarged or reduced copies of the soil map in this publication can be made by commercial photographers, or they can be purchased on individual order from the Cartographic Division, Soil Conservation Service, United States Department of Agriculture, Washington, D.C. 20250.

HOW TO USE THIS SOIL SURVEY

THIS SURVEY contains information that can be applied in managing farms, pasture, and woodlands; in selecting sites for roads, ponds, buildings, and other structures; and in judging the suitability of tracts of land for farming, industry, and recreation.

Locating Soils

All the soils of Talladega County are shown on the detailed map at the back of this publication. This map consists of many sheets made from aerial photographs. Each sheet is numbered to correspond with a number on the Index to Map Sheets.

On each sheet of the detailed map, soil areas are outlined and are identified by symbols. All areas marked with the same symbol are the same kind of soil. The soil symbol is inside the area if there is enough room; otherwise, it is outside and a pointer shows where the symbol belongs.

Finding and Using Information

The Guide to Mapping Units can be used to find information. This guide lists all the soils of the county in alphabetic order by map symbol and gives the capability classification of each. It also shows the page where each soil is described and the page for the capability unit in which the soil has been placed.

Individual colored maps showing the relative suitability or degree of limitation of soils for many specific purposes can be developed by using the soil map and the information in the text. Translucent material can be used as an overlay over the soil map and colored to show soils that have the same limitation or suitability. For example, soils that have a slight limitation for a given use can be colored green, those with a moderate limitation can be colored yellow, and those with a severe limitation can be colored red.

Farmers and those who work with farmers can learn about use and management of the soils from the soil descriptions and from the discussions of the capability units and woodland groups.

Foresters and others can refer to the section "Use of the Soils for Woodland," where the soils of the county are grouped according to their suitability for trees.

Game managers, sportsmen, and others can find information about soils and wildlife in the section "Soils and Wildlife Habitat."

Community planners and others can read about soil properties that affect the choice of sites for nonindustrial buildings and for recreation areas in the section "Use of the Soils in Town and Country Planning."

Engineers and builders can find, under "Use of the Soils in Engineering," tables that contain test data, estimates of soil properties, and information about soil features that affect engineering practices.

Scientists and others can read about how the soils formed and how they are classified in the section "Formation and Classification of the Soils."

Newcomers in Talladega County may be especially interested in the section "General Soil Map," where broad patterns of soils are described. They may also be interested in the information about the county given in the section "Climate" and the section "General Nature of the County."

Cover picture: **Summer homes and boat houses on Minvale-Bodine association, hilly.**

U.S. GOVERNMENT PRINTING OFFICE: 1974

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Contents

Issued June 1974

SOIL SURVEY OF TALLADEGA COUNTY, ALABAMA

BY JAMES A. COTTON, LEWIS A. DUNGAN, GLENN L. HICKMAN, AND CHARLES F. MONTGOMERY, SOIL CONSERVATION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE AND FOREST SERVICE, IN COOPERATION WITH THE ALABAMA AGRICULTURAL EXPERIMENT STATION AND THE ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES

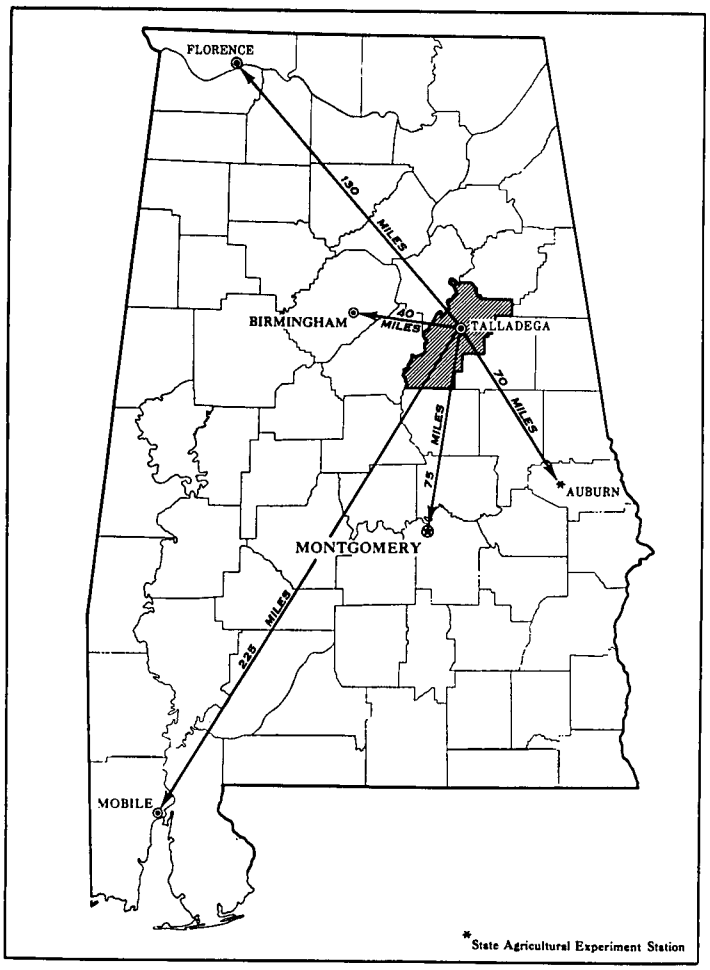


Figure 1.—**Location of Talladega County in Alabama.**

TALLADEGA COUNTY is in the east central part of Alabama (fig. 1). It covers a land area of 750 square miles, or 480,000 acres. In 1960 the population was 65,495 according to the 1960 census data. Talladega, the county seat and largest town, is in the central part of the county. The western boundary of Talladega County is the Coosa River. The county joins Calhoun County on the north, Cleburne and Clay Counties on the east, and Coosa County on the south.

The county lies within three major land resource areas. The eastern third of the county is in the Southern Piedmont. Most of the western two-thirds of the county is in the Southern Appalachian Ridges and Valleys. A small area in the northwestern part of the county and a small area in the southwestern part are in the Sand Mountain.

The climate of Talladega County is temperate. Rainfall is usually well distributed throughout the year. The summers are long and hot, and the winters are usually mild, but short, cold spells are not uncommon. The average number of frost-free days is 225, and the average daily temperature is about 62 degrees. Excellent sources of water are available for industrial, residential, recreational, and farm use.

About 25 percent of the land in the county is used for crops or pasture. In recent years the number of farms has steadily decreased, the acreage in cropland has decreased, and the acreage in farms has increased. The trend is toward larger farms and fewer farmers.

Many of the soils in the eastern and southern part of the county are so steep, shallow, and susceptible to erosion that they are not well suited to row crops or pasture. They are, however, well suited to timber production. The soils in the limestone valley and on the stream terraces are well suited to cropland, pasture land, and woodland. The soils on the cherty limestone ridges are too steep to be suited to cropland, but they are suited to pasture, if well managed, and to woodland. The soils on the shale, sandstone, and quartzite ridges are too steep and rocky to be suited to cropland or pasture. These areas are fairly well suited to woodland.

How This Survey Was Made

Soil scientists made this survey to learn what kinds of soil are in Talladega County, where they are located, and how they can be used. The soil scientists went into the county knowing they likely would find many soils they had already seen and perhaps some they had not. They observed the steepness, length, and shape of slopes, the size and speed of streams; the kinds of native plants or crops, the kinds of rock, and many facts about the soils. They dug many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into the parent material

that has not been changed much by leaching or by the action of plant roots.

The soil scientists made comparisons among the profiles they studied, and they compared these profiles with those in counties nearby and in places more distant. They classified and named the soils according to nationwide, uniform procedures. The *soil series* and the *soil phase* are the categories of soil classification most used in a local survey (*10*).[1]

Soils that have profiles almost alike make up a soil series. Except for different texture in the surface layer, all the soils of one series have major horizons that are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or other geographic feature near the place where a soil of that series was first observed and mapped. Allen and Anniston, for example, are the names of two soil series. All the soils in the United States having the same series name are essentially alike in those characteristics that affect their behavior in the undisturbed landscape.

Soils of one series can differ in texture of the surface soil and in slope, stoniness, or some other characteristic that affects use of the soils by man. On the basis of such differences, a soil series is divided into phases. The name of a soil phase indicates a feature that affects management. For example, Allen cobbly fine sandy loam, 2 to 10 percent slopes, is one of several phases within the Allen series.

After a guide for classifying and naming the soils had been worked out, the soil scientists drew the boundaries of the individual soils on aerial photographs. These photographs show woodlands, buildings, field borders, trees, and other details that help in drawing boundaries accurately. The soil map in the back of this publication was prepared from the aerial photographs.

The areas shown on a soil map are called mapping units. On most maps detailed enough to be useful in planning the management of farms and fields, a mapping unit is nearly equivalent to a soil phase. It is not exactly equivalent, because it is not practical to show on such a map all the small, scattered bits of soil of some other kind that have been seen within an area that is dominantly of a recognized soil phase.

Some mapping units are made up of soils of different series, or of different phases within one series. Three such kinds of mapping units are shown on the soil map of Talladega County, soil complexes, soil associations, and undifferentiated groups.

A soil complex consists of areas of two or more soils, so intermingled or so small in size that they cannot be shown separately on the soil map. Each area of a complex contains some of each of the two or more dominant soils, and the pattern and relative proportions are about the same in all areas. The name of a soil complex consists of the names of the dominant soils, joined by a hyphen. Tallapoosa-Tatum complex, 6 to 15 percent slopes, is an example.

A soil association is made up of adjacent soils that are present as areas large enough to be shown individually on the soil map, but are shown as one unit because the time and effort of delineating them separately, cannot be justified. There is a considerable degree of uniformity in pattern and relative extent of the dominant soils, but the soils may differ greatly one from another. The name of an association consists of the names of the dominant soils. Allen association, steep, and Tallapoosa-Tatum association, hilly, are examples.

An undifferentiated group is made up of two or more soils that could be delineated individually but are shown as one unit because, for the purpose of the soil survey, there is little value in separating them. The pattern and proportion of soils are not uniform. An area shown on the map may be made up of only one of the dominant soils, or of two or more. The name of an undifferentiated group consists of the names of the dominant soils, joined by "and." Chewacla and Chenneby soils is an example.

In most areas surveyed there are places where the soil material is so rocky, so shallow, or so severely eroded that it cannot be classified by soil series. These places are shown on the soil map and are described in the survey, but they are called land types and are given descriptive names. Slickens is a land type in Talladega County.

While a soil survey is in progress, samples of soils are taken, as needed, for laboratory measurements and for engineering tests. Laboratory data from the same kinds of soil in other places are assembled. Data on yields of crops under defined practices are assembled from farm records and from field or plot experiments on the same kinds of soil. Yields under defined management are estimated for all the soils.

But only part of a soil survey is done when the soils have been named, described, and delineated on the map, and the laboratory data and yield data have been assembled. The mass of detailed information then needs to be organized in such a way as to be readily useful to different groups of users, among them farmers, managers of woodland and rangeland, and engineers.

On the basis of yield and practice tables and other data, the soil scientists set up trial groups. They test these groups by further study and by consultation with farmers, agronomists, engineers, and others, then adjust the groups according to the results of their studies and consultation. Thus the groups that are finally evolved reflect up-to-date knowledge of the soils and their behavior under present methods of use and management.

General Soil Map

The general soil map at the back of this survey shows, in color, the soil associations in Talladega County. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern.

A map showing soil associations is useful to people who want a general idea of the soils in a county, who want to compare different parts of a county, or who want to know the location of large tracts that are suitable for a certain kind of land use. Such a map is a useful general guide in managing a watershed, a wooded tract, or a wildlife area, or in planning engineering works, recreational facilities, and community development. It is not a suitable map for planning the management of a farm or field, or for select-

[1] Italic numbers in parentheses refer to Literature Cited, p. 100.

ing the exact location of a road, building, or similar structure, because the soils in any one association ordinarily differ in slope, depth, stoniness, drainage, and other characteristics that affect their management.

The fourteen soil associations in Talladega County have been placed in four main groups: Soils of the Mountains, Soils of the Stony and Cherty Hills, Soils of the Flood Plains and Stream Terraces, and Soils of the Uplands. The soil associations in each group have the same color pattern on the general soil map.

The four main groups and the soil associations in Talladega County are described on the following pages.

Soils of the Mountains

The soils of the mountains are shallow to deep, well drained, and steep. Most of these soils formed in material weathered from slate and phyllite, and some in material weathered from sandstone and shale. These soils are characterized by short steep slopes, narrow ridgetops, and rock and shale outcrops. They are highly dissected. Slopes range up to 75 percent. The elevation is dominantly 1,000 to 1,900 feet.

These soils are mainly in the eastern and southern parts of the county. Nearly all the acreage is woodland. Most of the acreage is in the Talladega National Forest. There are a few small farms.

The area provides campsites and hiking and scenic trails and opportunities for hunting. Wildlife is abundant.

Soil associations 1, 2, and 3 are in this group. They make up about 28 percent of the county.

1. Tallapoosa-Tatum association

Shallow to deep, well-drained, steep, slaty, loamy soils derived from slate

This association is in the eastern and southern parts of the county. It is characterized by short, steep hillsides, narrow ridgetops, and narrow, nearly level strips in small drainageways.

It is about 75 percent short, steep hillsides. The hillsides are 50 to 300 feet long, and slopes are mostly 15 to 45 percent. Ridgetops are 50 to 150 feet wide, and slopes are 6 to 15 percent. The narrow strips in drainageways are 25 to 100 feet wide. The association is highly dissected in a dendritic drainage pattern.

This association makes up about 25 percent of the county. It is about 55 percent Tallapoosa soils, 19 percent Tatum soils, and the remaining 26 percent soils of minor extent.

Tallapoosa soils are on hillsides and ridgetops. They have a surface layer of very dark grayish-brown slaty silt loam and a subsoil of yellowish-red slaty silty clay loam that contains a large amount of soft slate fragments. The depth to slate ranges from 12 to 18 inches.

Tatum soils are on hillsides and narrow ridgetops. They have a surface layer of yellowish-brown slaty loam 4 to 10 inches thick and a subsoil of red silty clay more than 10 inches thick. The depth to partly weathered slate ranges from 30 to 50 inches.

Soils of minor extent in this association are in the Chenneby, Chewacla, Masada, and Talladega series. Chenneby and Chewacla soils are in narrow drainageways. Talladega soils form sharp breaks into the larger drainageways. Slopes are more than 45 percent. The gently sloping to steep Masada soils are on hillsides and toe slopes.

More than 95 percent of this association is woodland. The only open areas are the small isolated fields on ridgetops and in narrow bottoms. The U.S. Forest Service owns more than 45,000 acres throughout this association. Also, private companies own large tracts. The average size farm is 200 to 300 acres. Most of the acreage is owned by absentee owners. Only small acreages are farmed. Some small acreages that were cleared and farmed are now planted to pine.

Most of this association is very poorly suited to general farming, because the soils are steep and shallow. The association, however, is well suited to the production of timber. It is well suited to development of camp areas and hiking trails. This association, identified locally as the Talladega National Forest, is famous for its dense population of wild game. White-tailed deer, wild turkey, squirrel, and raccoon are popular game animals.

2. Townley-Enders-Montevallo association

Deep to shallow, well-drained, steep, loamy soils derived from shale

This association occupies three main areas in the county. One is along the Coosa River near Emory Bend in the northern part of the county, another is in the central part near Talladega, and the other is along the Coosa River in the southwestern part of the county near Talladega Springs. The areas are characterized by steep hillsides, very narrow ridgetops, and very narrow strips in drainageways. The areas are dissected by a complete drainage network consisting of small intermittent drains. Slopes are dominantly 15 to 45 percent.

This association makes up about 2 percent of the county. Townley soils make up about 45 percent of the acreage, Enders soils about 20 percent, and Montevallo soils about 15 percent. Soils of minor extent make up the remaining 20 percent.

The Townley, Enders, and Montevallo soils are on hillsides and narrow ridgetops throughout the association.

Townley soils have a surface layer of very dark grayish-brown gravelly loam 5 to 10 inches thick and a subsoil of yellowish-red silty clay or clay 10 to 18 inches thick. In most places the lower part of the subsoil is mottled with shades of brown, yellow, olive, and red. The depth to shale ranges from 24 to 36 inches.

Enders soils have a surface layer of very dark grayish-brown shaly loam 3 inches thick and a subsoil of yellowish-red silty clay or clay more than 20 inches thick. The lower part of the subsoil normally is mottled with shades of red, yellow, and brown. The depth to shale ranges from 42 to 60 inches.

Montevallo soils have a surface layer of very dark grayish-brown shaly silt loam 2 inches thick and a subsoil of reddish-yellow shaly silt loam that is more than 35 percent coarse fragments. The depth to rock is 10 to 20 inches.

Soils of minor extent in this association are in the Allen, Hector, Holston, Lobelville, and Locust series. Allen, Holston, and Locust soils are mainly on toe slopes, Hector soils on narrow ridgetops, and Lobelville soils in narrow drainageways.

Most of this association is wooded. A few small areas on the broader ridgetops are cleared, but most of these are idle. Individuals own most of the land in these areas. Few farms are entirely within this association. Numerous cabins for hunters and fishermen are along the river, but permanent residences are few.

Most of this association is very poorly suited to farming because of the steep slopes, shallow soils, and very high erosion hazard in cleared areas. It is suited to timber. Areas along the Coosa River are being developed as cabin sites, and many access roads have been constructed. This association is well suited to recreation activities, such as hunting and hiking.

3. *Clymer association*

Moderately deep, well-drained, steep, stony, loamy soils derived from sandstone or quartzite

This association is in the southeastern part of the county. It is a prominent ridge (fig. 2) near Chandler Springs. Slopes range from 20 to 50 percent. From 20 to 85 percent of the surface is covered with stones or rocks that range in size from 1 inch to 20 feet. Bluffs and escarpments occur on the eastern hillsides. The elevation ranges from 1,400 to 1,919 feet and is the highest part of the county.

This association makes up about 1 percent of the county. Clymer soils make up about 60 percent of the acreage. Soils of minor extent make up the remaining 40 percent.

Clymer soils have a surface layer of very dark gray or brown stony loam 4 inches thick. The subsoil, about 21 inches thick, is yellowish-brown sandy clay loam in the upper part and stony sandy loam in the lower part. The underlying material is mottled light-gray, pale-yellow, and brownish-yellow coarse sandy loam. Sandstone or quartzite bedrock is at depths ranging from 24 to 42 inches.

Soils of minor extent in this association are in the Allen, Hector, Tallapoosa, and Tatum series and include soils that are similar to Clymer but have a yellowish-red subsoil. These soils are all on the steep hillsides.

All of this association is wooded. The U.S. Forest Service owns most of the land in this association. The rest is owned by individuals; the average size holding is 200 acres. There are no permanent residences in this association, and no farming is attempted.

This association is not suited to farming because of the steep slopes and stony surface. These conditions make harvesting operations for timber extremely difficult. Tree growth is better on the slopes than on the narrow ridgetop. Roads, except on the ridgetop, are extremely difficult to construct and maintain. This association is well suited to hiking and hunting and is very scenic.

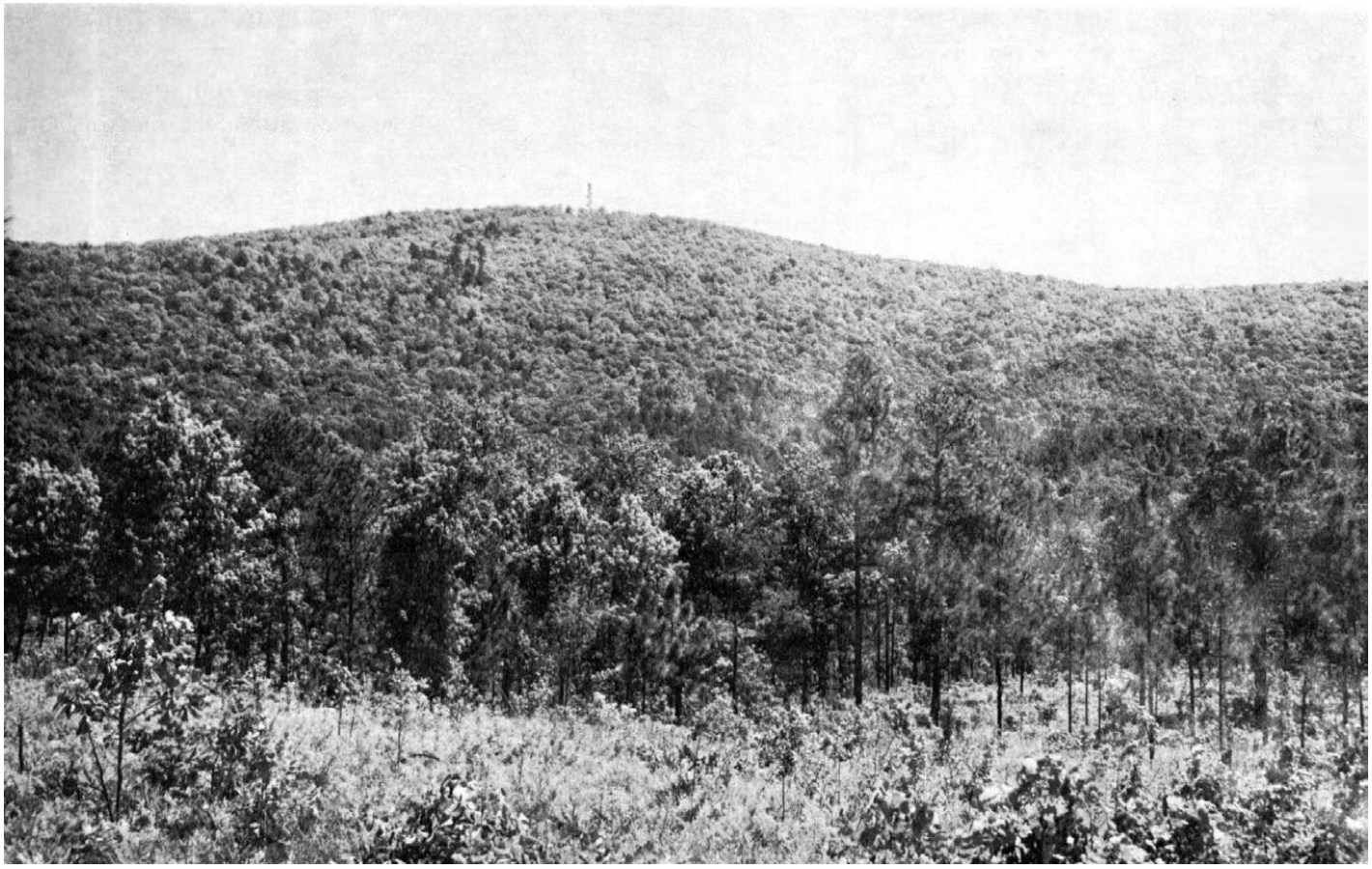


Figure 2.—Typical view of association 3 in background. Foreground is association 10.

Soils of the Stony and Cherty Hills

The soils of the stony and cherty hills are deep and well drained. They have a high content of chert, gravel, and rocks. These soils are steep, but are not so steep as the soils in mountain areas.

These soils occur as scattered areas mainly in the western two-thirds of the county. They are fairly well suited to woodland, but harvesting is somewhat difficult. Because of the steep slopes and the chert and gravel, there is very little farming.

Wildlife is fairly abundant in this group.

Soil associations 4 and 5 are in this group. They make up about 14 percent of the county.

4. Bodine-Minvale association

Deep, well-drained, steep, cherty, medium-textured soils derived from cherty limestone

This association occurs throughout the county in many different tracts that range in size from a few hundred to several thousand acres. It is characterized by steep hillsides that have very narrow, winding ridgetops and narrow strips in the intermittent drains. Slopes are dominantly 15 to 35 percent, but they range from 6 to 45 percent. The slope pattern is complex. Limestone sinks and small chert pits are common. Most areas have a cherty surface, but a few areas are stony.

This association makes up about 10 percent of the county. Bodine soils make up about 45 percent of the acreage, Minvale soils about 32 percent, and soils of minor extent, the remaining 23 percent.

The Bodine and Minvale soils are on ridgetops and hillsides throughout the association.

Bodine soils have a surface layer of dark grayish-brown and very dark gray cherty silt loam 2 to 5 inches thick. The upper 19 inches of the subsoil is yellowish-brown cherty loam that is 50 to 60 percent chert fragments. The lower part of the subsoil is cherty clay loam that is 35 to 80 percent cherty fragments. It is more than 35 inches thick. Depth to limestone bedrock is more than 5 feet.

Minvale soils have a surface layer of very dark grayish-brown cherty silt loam 3 inches thick. The upper part of the subsoil is strong-brown loam and yellowish-red clay loam about 26 inches thick. The lower part of the subsoil is yellowish-red cherty clay loam mottled with brownish yellow. The chert content of the subsoil ranges from about 10 percent in the upper part to 75 percent in the lower part. Depth to limestone bedrock is more than 6 feet.

Soils of minor extent in this association are in the Beason, Decatur, Dewey, Fullerton, Grasmere, Guthrie, Lee, Lobelville, Locust, and Melvin series. Decatur, Dewey, and Fullerton soils are on ridgetops and hillsides. Grasmere, Lee, Lobelville, and Melvin soils are in narrow drains. Locust soils are on foot slopes and in narrow drains, and Beason and Guthrie soils are in low wet areas.

About 90 percent of the association is in mixed hardwoods and pine. A few areas have a pure hardwood stand. The open areas are in small isolated fields on narrow ridgetops and in the bottoms. Most of the open areas are idle, but a few are used for pasture. Individuals and private companies own most of the land. Farms range from a few acres to several hundred acres. The average size farm is about 175 acres. Farming is a part-time enterprise in these areas.

Most of the association is very poorly suited to farming because of the steep, complex slopes and the chert fragments on the surface. It is well suited to woodland. If properly managed, areas where slopes are less than 25 percent are suitable for pasture. The cherty surface, however, interferes with cultivation and mowing operations. Areas along Logan Martin Lake are being developed for cabin sites (fig. 3) and many access roads have been built along the lake.

5. Allen association

Deep, well-drained, steep, cobbly and gravelly, moderately coarse textured soils derived from sandstone and shale

This association is mainly in the central and southwestern part of the county. A large area is near Talladega, another is southwest of Childersburg, and smaller areas are west of Winterboro. This association is characterized by steep, rocky hills or mountains that have very narrow ridgetops. (fig. 4). The upper third of the slopes and the ridgetops are extremely rocky. On many of the peaks, the entire surface is covered with quartzite rocks that range from 6 inches to 25 feet in diameter. Slopes range from 15 to 50 percent but are dominantly 25 to 50 percent.

This association makes up about 4 percent of the county. Allen soils account for about 85 percent of the acreage. Soils of minor extent make up the remaining 15 percent.

The steep Allen soils occupy hillsides throughout the association. They have a surface layer of brown cobbly fine sandy loam 6 inches thick. The upper 28 inches of the subsoil is yellowish-red sandy clay loam. The lower part of the subsoil is red clay loam mottled in the lower part with brownish yellow. It is more than 40 inches thick. Depth to rock is more than 5 feet.

Soils of minor extent in this association are in the Clymer, Enders, Hector, Locust, Montevallo, and Townley series. Clymer, Enders, and Montevallo soils are on hillsides, Locust soils are on foot slopes, and Hector and Townley soils are on upper slopes, ridgetops, and peaks.

Most of the association is in mixed hardwoods and pine. In many areas the hardwoods have been killed and there is a pure stand of young pines. Private companies own most of the land; their tracts range up to several thousand acres in size. Individuals own some land; their tracts average about 60 acres in size. There is no farming, but timber is harvested.

This association is poorly suited to farming because of the very steep slopes, rocky surface, and severe erosion hazard. There are no permanent residences in this association. The association is suited to timber production, but the steep slopes and rocky surface hamper harvesting operations. Hiking trails and camp areas could be developed in this association.

Soils of the Flood Plains and Stream Terraces

The soils of the flood plains and stream terraces are deep, well drained to poorly drained, and nearly level. These soils are mainly along the larger streams in the county. They are among the productive soils in the county,

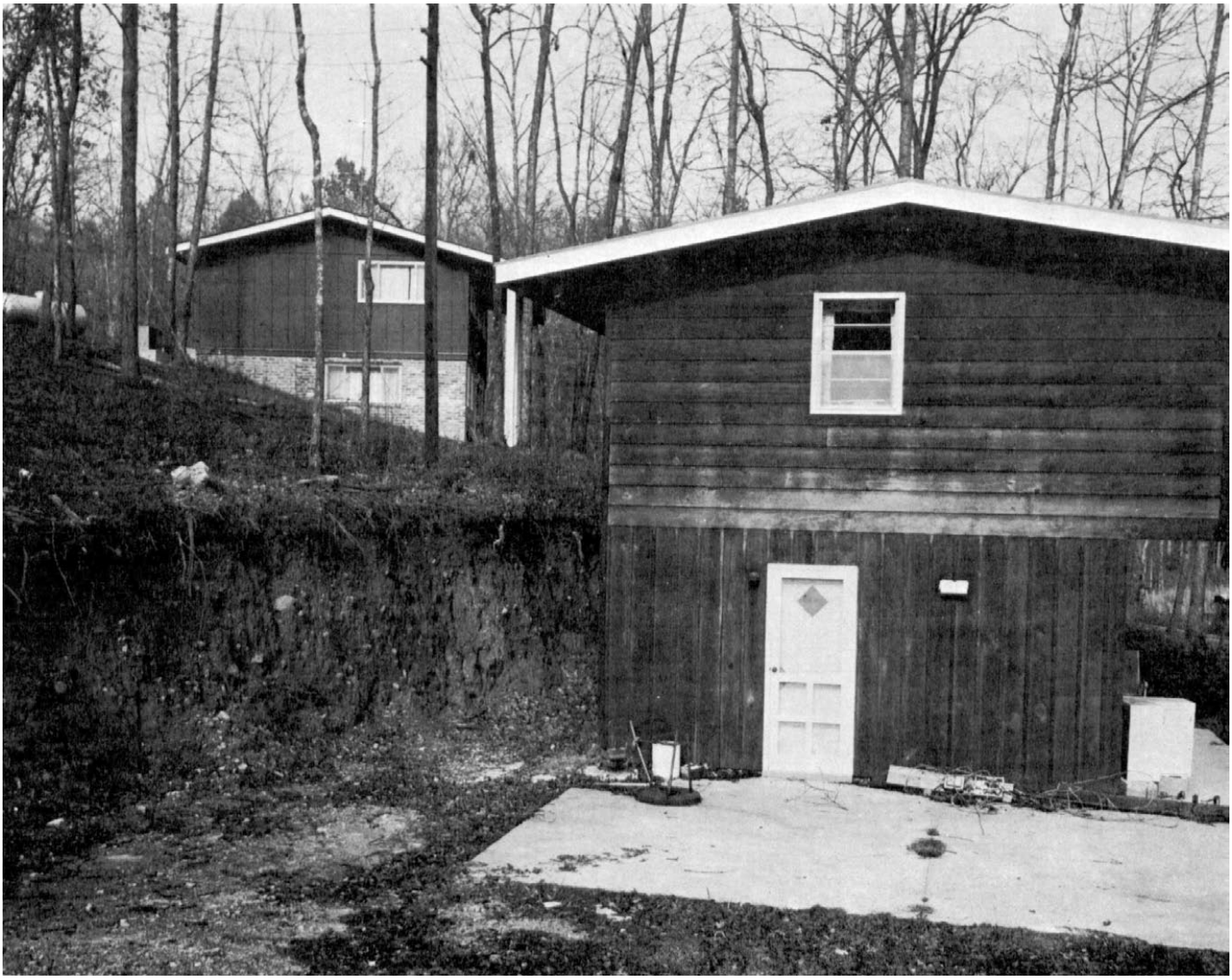


Figure 3.—**Cottages along Logan Martin Lake in association 4. The soil is Minvale-Bodine association, hilly.**

but flooding and poor drainage in some areas cause severe limitations for farming and also for urban development.

Soil associations 6 and 6a are in this group. They make up about 11 percent of the county.

6. *Chewacla-Chenneby-McQueen association*

Deep, somewhat poorly drained to well-drained, nearly level, loamy soils on first bottoms and stream terraces; subject to flooding

This association is along Cheaha, Choccolocco, Salt, Talladega, and Tallaseehatchee Creeks and their tributaries. It is characterized by broad (fig. 5) to narrow, nearly level to gently sloping areas on first bottoms and low stream terraces that are subject to flooding. The stream terraces are flooded once in 5 to 10 years, and the first bottoms at least once a year. Slopes range from 0 to 6 percent but are dominantly 0 to 2 percent.

This association makes up about 10 percent of the county. Chewacla soils make up about 16 percent of the association, Chenneby soils about 15 percent, and McQueen soils about 15 percent. The remaining 54 percent is made up of soils of minor extent.

Chewacla soils are somewhat poorly drained. They have a surface layer of mottled brown and pale-olive silt loam. The upper part of the subsoil is yellowish-brown gravelly silt loam and the lower part is mottled loam and sandy loam. Below this is sand and gravel.

Chenneby soils are somewhat poorly drained. They have a surface layer of silt loam and a subsoil of dark grayish-brown to gray silt loam and silty clay loam mottled with gray and dark gray. The gray color increases with depth.

McQueen soils are well drained. They have a surface layer of brown silt loam 10 inches thick. The subsoil is yellowish-red silty clay loam and silty clay that becomes coarser textured with depth.

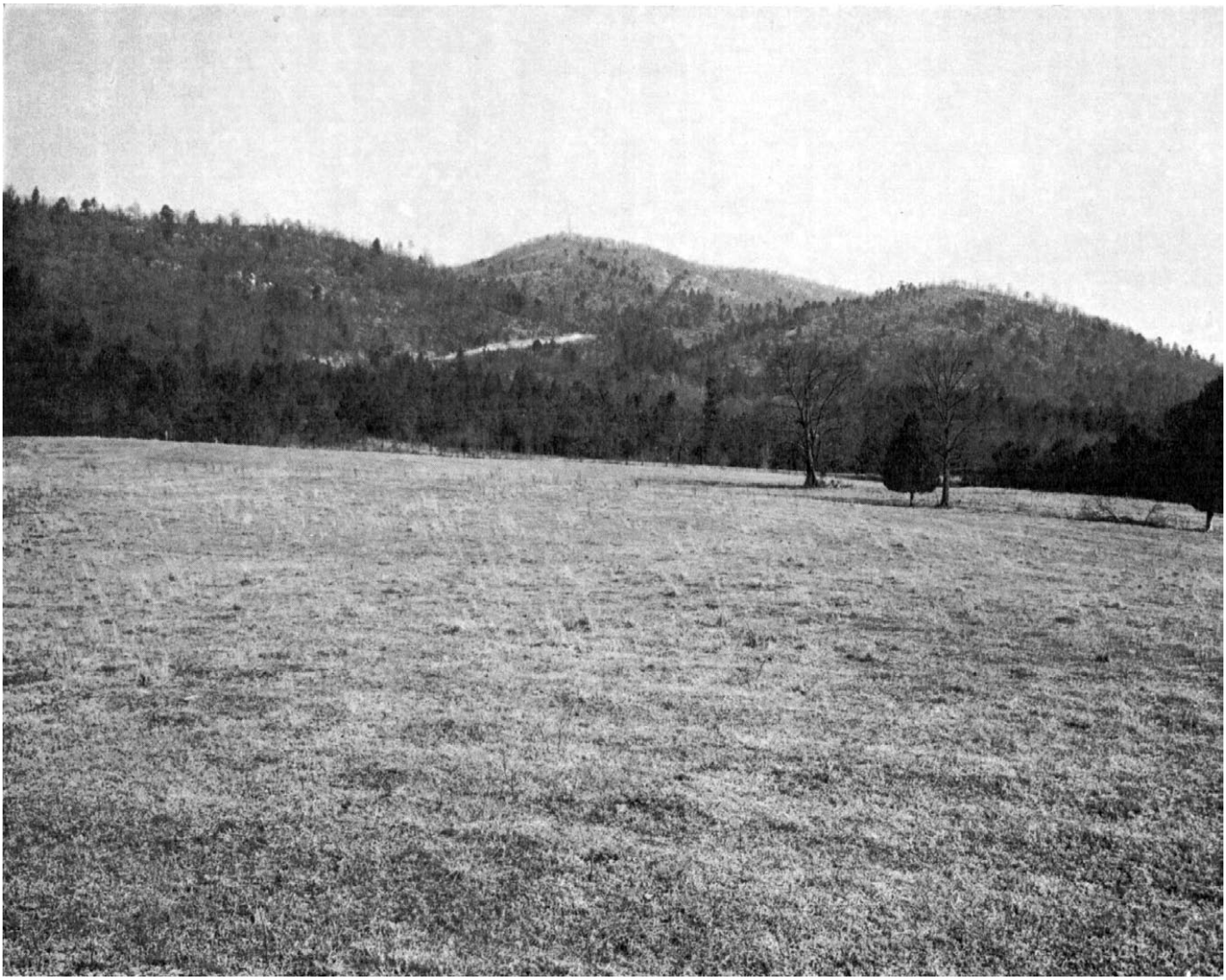


Figure 4.—**The steep hills in background represent association 5. Foreground is association 7.**

Soils of minor extent in this association are in the Choccolocco, Leadvale, Lobelville, Locust, Melvin, Toccoa, and Wickham series. These soils are on stream terraces and on flood plains. They range from well drained to poorly drained.

About 75 percent of the association has been cleared and is used for crops and pasture. Most of the soils are moderate in natural fertility and respond well to management. Drainage is needed in the somewhat poorly drained and poorly drained areas. Erosion is not a serious hazard.

Individuals own most of the land in this association, and the average size farm is about 185 acres. Much of the row cropland is rented or leased by operators who tend large acreages. Most of the association is well suited to general farming, but flooding occasionally damages crops. Flooding occurs mainly late in winter and spring. Soybeans, cotton, corn, and pasture are the main crops. There are several sand and gravel pits in this association, especially along Choccolocco Creek.

The soils on the flood plains are not suited to urban development.

6a. Lobelville-Chewacla-Chenneby association

Deep, moderately well drained and somewhat poorly drained, loamy soils on first bottoms

This association occupies long, nearly level, narrow to fairly wide flood plains along the larger creeks in the northern and western parts of the county. It adjoins gently sloping to steep uplands. Along Blue Eye, Eastaboga, Clear, Poorhouse, and Fannin Creeks and some of the other smaller creeks, this association is subject to very frequent flooding mainly late in winter and early in spring.

Figure 5.—**Typical landscape in association 6. Soil in foreground is McQueen silt loam, 0 to 2 percent slopes. Hills in background are Minvale-Bodine association, hilly.**

This association makes up about 1 percent of the county. Lobelville soils account for about 60 percent of the acreage, Chenneby soils about 10 percent, Chewacla soils about 10 percent, and soils of minor extent the remaining 20 percent of the association.

Lobelville soils are moderately well drained. They have a surface layer of brown loam 7 inches thick and a subsoil of grayish-brown cherty loam, silt loam, and clay loam mottled with olive yellow and light gray.

Chewacla soils are somewhat poorly drained. They have a surface layer of mottled brown and pale-olive silt loam. The upper part of the subsoil is yellowish-brown gravelly silt loam, and the lower part mottled loam and sandy loam. It is underlain by sand and gravel.

Chenneby soils are somewhat poorly drained. They have a surface layer of brown silt loam and a subsoil of dark grayish-brown to gray silt loam and silty clay loam mottled with gray and dark gray. The gray color increases with increasing depth.

Soils of minor extent in this association are in the Dowellton, Guthrie, Leadvale, Lee, Locust, Melvin, and Minvale series. These soils are on flood plains and low stream terraces. Dowellton, Guthrie, Lee, and Melvin soils are poorly drained; Leadvale and Locust soils are moderately well drained and have fragipans; and the Minvale soil is well drained.

About 65 percent of the association has been cleared. It is used mainly for pasture and partly for crops. The soils are moderate in fertility and productive. Drainage is needed in the somewhat poorly drained and poorly drained areas. There is no erosion hazard, except where floods cause scouring.

Individuals own most of the land in this association. There are no farms entirely within this association because of its long, narrow, and irregular shape. The association is well suited to pasture, woodland, and cropland. In unprotected areas, flooding causes serious crop damage.

Because of poor drainage and flooding, only a small part of this association is suited to urban development.

Soils of the Uplands

Soils on uplands are dominantly deep, well drained, and gently sloping to sloping. There are, however, some shallow soils and some moderately well drained soils in this group. Most of these soils have a loamy surface layer and many have a clayey subsoil.

The largest areas are along and to the west of State Highway No. 21. They are considered the row crop farming areas for the county.

Soil associations 7 through 13 are in this group. They make up about 47 percent of the county.

7. *Allen-Locust association*

Deep, well drained and moderately well drained, loamy soils derived from sandstone, shale, and cherty limestone

This association is mainly at the foot of association 5, in the central part of the county. It is a gently sloping and sloping toe slope or benchlike area that is dissected by a few intermittent drains. In about half of the association, the surface layer is gravelly, and in 10 percent, it is cobbly. Slopes range from 0 to 15 percent but are dominantly 2 to 6 percent. The largest area is along the toe slope of the mountains near Talladega.

This association makes up about 6 percent of the county. Allen soils make up about 50 percent of the association, Locust soils about 22 percent, Anniston soils about 5 percent, and minor soils the remaining 23 percent.

Allen soils are well drained. They have a surface layer of brown gravelly fine sandy loam. The upper part of the subsoil is yellowish-red sandy clay loam and the lower part is red clay loam mottled with strong brown and pale brown. Depth to rock is greater than 5 feet.

Locust soils are moderately well drained. They have a surface layer of brown silt loam and a subsoil of olive-yellow loam underlain by a compact and brittle fragipan at a depth of 24 inches. Depth to rock is 4 to 6 feet.

Anniston soils have a surface layer of dark reddish-brown loam. The upper part of the subsoil is dark-red clay loam, and the lower part is dark-red clay or clay loam. Depth to rock is greater than 6 feet.

Soils of minor extent in this association are in the Beason, Cane, Chenneby, Chewacla, Decatur, Dewey, Leadvale, Lee, and Townley series. About half the acreage of these soils is on uplands, and the rest are on low terraces and flood plains.

About 60 percent of the association has been cleared and is used for crops or pasture. The soils are low in natural fertility, but they respond well to lime, fertilizer, and management. Except in areas where the surface layer is cobbly or gravelly sandy clay loam, these soils are easy to work and to keep in good tilth.

Most of the association is well suited to crops, pasture, and woodland. The soils that have a cobbly surface layer are mainly in pine trees, but a few are used for pasture.

Private companies and the Department of the Army own large acreages in this association, but there are several farms. The average size farm is about 165 acres. Most of the farms are operated by owners who work off the farm part of the time. Cotton, corn, pasture, and hay are the main crops.

The well-drained areas on the lower slopes are fairly well suited to urban development.

8. *Decatur-Dewey-Fullerton association*

Deep, well-drained loamy soils derived from limestone

This association occurs throughout the county as tracts that range from a few hundred to several thousand acres. It is characterized by nearly level to moderately steep upland areas that have a complex slope pattern and are dissected by intermittent and permanent streams and by narrow to broad strips on bottom land. There are many broad, nearly level to gently sloping areas that are well suited to farming. Limestone sinks are common throughout the association. Large areas are in the Talladega, Sylacauga, Fayetteville, Childersburg, and Lincoln communities.

This association makes up about 25 percent of the county. Decatur soils make up about 34 percent of the association, Dewey soils about 24 percent, Fullerton soils about 23 percent, and minor soils the remaining 19 percent.

Decatur soils have a surface layer of dark reddish-brown loam, silt loam, and silty clay loam and a subsoil of dark-red clay more than 6 feet thick.

Dewey soils have a surface layer of reddish-brown loam and clay loam. The upper part of the subsoil is red clay loam and clay, and the lower part is yellowish-red clay and mottled clay loam. Depth to rock is more than 6 feet.

Fullerton soils have a surface layer of dark grayish-brown and dark-gray cherty silt loam and cherty silty clay loam. The upper part of the subsoil is red clay and the lower part is mottled yellowish-red and brownish-yellow cherty clay. Depth to rock is more than 6 feet.

Soils of minor extent in this association are in the Beason, Bodine, Chenneby, Chewacla, Dowellton, Grasmere, Guthrie, Leadvale, Lee, Lobelville, Locust, Melvin, and Minvale series. Some are on uplands. The rest are on flood plains, on low stream terraces, and in depressions.

About 80 percent of the association has been cleared and is used for crops or pasture. Under good management, the soils are productive. Most of the soils are low in natural fertility but they respond well to lime and fertilizer. Except where the surface layer is silty clay loam, the soils are easy to work and to keep in good tilth. Chert fragments on the surface in some areas interfere with tillage.

Most of this association is well suited to crops, pasture, and woodland. Individuals own most of the land. However, private companies and the Department of the Army own a few large tracts. Several farms in the association are larger than 750 acres. Excluding these large farms, the average size farm is about 250 acres. Most farms are operated by owners. A few owners rent other row cropland and operate large units. On many farms, beef cattle are an important enterprise. There are a few dairy farms. Soybeans, cotton, corn, hay, and pasture are the main crops. All the marble quarries in Talladega County are in this association.

Most of the well-drained areas in this association are fairly well suited to urban development.

9. *Bodine-Minvale-Locust association*

Deep, well drained and moderately well drained, cherty, loamy soils derived from cherty limestone

This association occurs throughout the northern and western parts of the county. It is characterized by narrow, cherty ridgetops, strong and moderately steep, cherty slopes, and gently sloping, narrow strips in small drainageways. Limestone sinks are common. Slopes range from 2 to 15 percent but are dominantly 6 to 10 percent. The slope pattern is complex.

This association makes up about 6 percent of the county. Bodine soils make up about 42 percent of the association, Minvale soils about 25 percent, Locust soils about 16 percent, and soils of minor extent the remaining 17 percent.

Bodine soils have a surface layer of very dark gray cherty silt loam. The upper part of the subsoil is yellowish-brown cherty loam, and the lower part is strong-brown and yellowish-red cherty clay loam mottled with brownish yellow. The chert content of the subsoil ranges from 35 to 80 percent. Depth to rock is more than 5 feet.

Minvale soils have a surface layer of very dark grayish-brown cherty silt loam 3 inches thick. The upper part of the subsoil is strong-brown loam and yellowish-red clay loam. The lower part is yellowish-red cherty clay loam mottled with brownish yellow. Depth to rock is more than 6 feet.

Locust soils have a surface layer of brown silt loam. The subsoil is olive-yellow loam that is underlain by a compact and brittle loam and gravelly sandy loam fragipan. The color of the pan is mottled yellowish brown, pale olive, and light gray. Depth to rock is 4 to 6 feet.

Soils of minor extent in this association are in the Beason, Decatur, Dewey, Fullerton, Grasmere, Leadville, Lee, Lobelville, and Melvin series. Some of these soils are on uplands. The rest are on flood plains and low terraces.

About 60 percent of the association is woodland. The broad ridgetops and narrow drainageways are cleared. Most are idle. The soils are low in natural fertility and organic-matter content. This association is poorly suited to crops because of the small irregular shape of the fields and the large amount of chert on the surface. It is suited to pasture, but in some places the chert fragments interfere with mowing operations and seedbed preparation.

Most of the land in this association is owned by individuals. The average size farm is about 140 acres. Pasture, hay, and cotton are the main crops. Most of the farming is on a part-time basis, and the operators work off the farm part of the time. There are a few chert pits in this association.

Some areas are fairly well suited to urban development.

10. Tatum-Tallapoosa-Wickham association

Deep, moderately deep, and shallow, well-drained, loamy soils derived from slate

This association is in the southern part of the county, south and northwest of Sylacauga, and north of Fayetteville. Many small areas are in the eastern part of the county in the Talladega National Forest on the broader ridgetops. The association is characterized by narrow, gently sloping and sloping ridgetops, sloping and moderately steep hillsides, gentle foot slopes, and very narrow strips on bottom land. It is highly dissected by a complete drainage network of small intermittent drains. Slopes range from 2 to 15 percent but are dominantly 2 to 10 percent.

This association makes up about 6 percent of the county. Tatum soils make up about 40 percent of the association, Tallapoosa soils about 20 percent, Wickam soils about 8 percent, and less extensive soils the remaining 32 percent.

Tatum soils have a surface layer of yellowish-brown slaty loam and a subsoil of red silty clay. Depth to soft slate bedrock ranges from 30 to 50 inches.

Tallapoosa soils have a surface layer of very dark grayish-brown slaty silt loam and a subsoil of yellowish-red slaty silty clay loam less than 10 inches thick. Depth to soft slate bedrock is 12 to 18 inches.

Wickham soils are mainly on toe slopes. Wickham soils have a surface layer of brown fine sandy loam and slaty loam and a subsoil of yellowish-red sandy clay loam underlain by sand or loamy sand.

Soils of minor extent in this association are in the Chenneby, Chewacla, Dowellton, Masada, Sylacauga, and Toccoa series. The steep soils are on hillsides, Masada soils are on stream terraces, and Chewacla, Chenneby, and Toccoa soils are on flood plains.

About 70 percent of the association is woodland. The smoother ridgetops and broader bottoms are cleared. Most of these areas are idle or are used for pasture. The soils are low in natural fertility and low in organic matter content. This association is suited to pasture and woodland. It is poorly suited to cultivated crops because of the small size and irregular shape of the open areas. Erosion is a serious hazard where slopes are more than 10 percent and a moderate hazard in areas of lesser gradient.

Most of the land inside the National Forest Boundary is owned by the U.S. Forest Service. Most of the remaining acreage is owned by individuals. There are very few farms entirely within this association. Pasture and hay are the principal crops. Farming is on a part-time basis.

Part of this association is suited to urban development. Some areas are too steep, and some are on flood plains.

11. Bremo association

Shallow, well-drained, loamy soils derived from schist

This association is in the Chandler Springs area in the southeastern part of the county. It is characterized by broad, nearly level to sloping uplands and a few shallow intermittent drains. Small areas are extremely rocky; in many places 10 to 25 percent of the surface is covered with green schist rock fragments. The vegetation is scrub hardwood and pine and a dense understory of crabapple, huckleberry, smilax, and dogwood. Slopes range from 0 to 12 percent but are dominantly 0 to 6 percent.

This association makes up about 1 percent of the county. It is about 35 percent Bremo soils and 65 percent soils of minor extent.

Bremo soils have a surface layer of very dark grayish-brown slaty silt loam and a subsoil of light olive-brown slaty silt loam mottled with light yellowish brown and light brownish gray. Depth to schist bedrock is less than 24 inches.

Soils of minor extent in this association are in the Allen, Chenneby, Chewacla, Tallapoosa, Tatum, and Toccoa series. The sloping to steep soils are on uplands. The others are on flood plains.

More than 90 percent of the acreage is woodland. The soils are shallow, droughty, and rocky in places. Most are low in natural fertility. A few small areas were once cleared but are now in pine trees. Slate and schist fragments on the surface interfere with tillage but do not hamper harvesting operations for timber.

This association is not suited to crops or pasture because of the shallow, droughty soils and the slate and schist fragments on the surface. It is fairly well suited to woodland, but tree growth is slow. Individuals own most of the land. The average size farm is 160 acres.

Farming is of minor importance. Most people who live on this association work off the farm.

Urban development is restricted because the soils are so shallow over bedrock.

12. Townley association

Moderately deep, well-drained, loamy soils derived from shale and sandstone

This association occurs as two areas. One is in the northern part along the county line, and the other is southwest of Childersburg along the Coosa River. The landscape is one of broad, gently sloping and sloping uplands that are dissected by a few intermittent streams. The vegetation is mixed hardwoods and pines. Slopes range from 2 to 10 percent but are dominantly 2 to 6 percent.

This association makes up about 1 percent of the county. It is about 75 percent Townley soils and 25 percent soils of minor extent.

Townley soils have a surface layer of very dark grayish-brown gravelly loam. The upper part of the subsoil is yellowish-red clay or silty clay, and the lower part is clay mottled with light yellowish brown, pale brown, and red. Depth to shale ranges from 24 to 36 inches.

The soils of minor extent in this association are in the Bodine, Dewey, Dowellton, Enders, Lobelville, and Montevallo series. They are dominantly sloping to steep soils on uplands. Some are on flood plains and low stream terraces.

About 75 percent of the association is woodland. In most areas natural fertility is low. The response to lime and fertilizer is only fair. The erosion hazard is moderate to severe in tilled areas.

This association is fairly well suited to crops and pasture and is well suited to woodland. Individuals own most of the land, and the average size farm is 150 acres. There are very few farms entirely within this association. Most farm operators work off the farm part of the time.

Limitations to urban development are the clayey subsoil and the depth to bedrock.

13. Allen-Holston-Cane association

Deep, well drained and moderately well drained, loamy soils derived from sandstone, shale, and cherty limestone

This association is on the high stream terraces along the Coosa River in the western part of the county, west of Lincoln, west of Grasmere, and southwest of Childersburg. It is characterized by fairly broad, gently sloping and sloping uplands that are dissected by intermittent streams and by fairly broad, nearly level, moderately well drained to somewhat poorly drained strips on bottom land.

This association makes up about 2 percent of the county. Allen soils make up about 50 percent of the association, Holston soils about 12 percent, Cane soils about 10 percent, and soils of minor extent the remaining 28 percent.

Allen soils have a surface layer of brown gravelly fine sandy loam. The upper part of the subsoil is yellowish-red sandy clay loam, and the lower part is red clay loam mottled with yellowish red, strong brown, and pale brown. Depth to rock is more than 5 feet.

Holston soils have a surface layer of brown fine sandy loam. The upper part of the subsoil is yellowish-brown loam, and the lower part is mottled sandy clay loam or clay loam. Depth to rock is more than 6 feet.

Cane soils have a surface layer of brown fine sandy loam and a subsoil of yellowish-red loam that is underlain by a compact and brittle fragipan at a depth of 26 inches. Depth to rock is more than 6 feet.

Soils of minor extent in this association are in the Beason, Decatur, Dewey, Dowellton, Guthrie, Leadvale, Lee, and Lobelville series. Some are on uplands and high stream terraces, and the rest are on flood plains and low stream terraces.

About 85 percent of the association has been cleared and is used for crops or pasture. Most of the soils are low in natural fertility, but they respond well to lime, fertilizer, and management. Except in small eroded areas, the soils are very easy to work and to keep in good tilth.

Most of the association is well suited to crops, pasture, and woodland. Individuals own most of the land, and the average size farm is 225 acres. About a third of the land is operated by owners and about two-thirds by tenants. Cotton, corn, soybeans, pasture, and hay are the main crops. On many farms beef cattle are an important enterprise. Areas along the Coosa River are being developed for cabin sites.

In the nearly level, well-drained parts of this association there are few limitations to urban development.

Descriptions of the Soils

This section describes the soil series and mapping units in Talladega County. Each soil series is described in considerable detail, and then, briefly, each mapping unit in that series. Unless it is specifically mentioned otherwise, it is to be assumed that what is stated about the soil series holds true for the mapping units in that series. Thus, to get full information about any one mapping unit, it is necessary to read both the description of the mapping unit and the description of the soil series to which it belongs.

An important part of the description of each soil series is the soil profile, that is, the sequence of layers from the surface downward to rock or other underlying material. Each series contains two descriptions of this profile. The first is brief and in terms familiar to the layman. The second, detailed and in technical terms, is for scientists, engineers, and others who need to make thorough and precise studies of soils. Unless it is otherwise stated, the color and consistence given in the descriptions are those of a moist soil.

As mentioned in the section "How This Survey Was Made," not all mapping units are members of a soil series. Slickens, for example, does not belong to a soil series, but nevertheless is listed in alphabetic order along with the soil series.

Following the name of each mapping unit is a symbol in parentheses. This symbol identifies the mapping unit on the detailed soil map. Listed at the end of each description of a mapping unit is the capability unit and woodland group in which the mapping unit has been placed. The page for the description of each cap-

ability unit can be found by referring to the "Guide to Mapping Units" at the back of this survey.

The acreage and proportionate extent of each mapping unit are shown in table 1. Many of the terms used in describing soils can be found in the Glossary at the end of this survey, and more detailed information about the terminology and methods of soil mapping can be obtained from the Soil Survey Manual (*10*).

Allen Series

The Allen series consists of deep, well-drained soils on toe slopes, hillsides, and stream terraces. These soils formed in colluvium or general alluvium derived from sandstone and shale.

In a representative profile the surface layer is brown gravelly fine sandy loam about 4 inches thick. The subsoil is strong-brown, very friable loam in the uppermost 5 inches. The second layer of the subsoil is yellowish-red, friable sandy clay loam 10 inches thick. The next 23 inches is red friable clay loam that is mottled with yellowish red in the lower 15 inches. The lowermost 18 inches of the subsoil is mottled red, strong-brown, and very pale brown, firm clay loam.

Allen soils are widely distributed throughout the county. Most areas where the surface layer is cobbly and stony and all areas where slopes are more than 10 percent are in woodland.

Representative profile of Allen gravelly fine sandy loam, 2 to 6 percent slopes, in an idle area 50 feet north of entrance to north gate of Coosa River Ordinance Works (subdepot), NE¼NW¼ sec. 6, T. 18 S., R. 6 E.:

Ap—0 to 4 inches, brown (10YR 4/3) gravelly fine sandy loam; weak, fine, granular structure; very friable;

TABLE 1.—*Approximate acreage and proportionate extent of the soils*

Soil	Area	Extent	Soil	Area	Extent
	Acres	*Percent*		*Acres*	*Percent*
Allen cobbly fine sandy loam, 2 to 10 percent slopes	2,948	0.6	Guthrie silt loam	1,093	0.2
Allen gravelly fine sandy loam, 2 to 6 percent slopes	7,266	1.5	Holston fine sandy loam, 2 to 6 percent slopes	1,270	.3
Allen gravelly fine sandy loam, 6 to 10 percent slopes	6,695	1.4	Holston gravelly fine sandy loam, 6 to 15 percent slopes	419	.1
Allen gravelly fine sandy loam, 10 to 15 percent slopes	1,684	.4	Leadvale silt loam	4,569	1.0
Allen gravelly sandy clay loam, 2 to 6 percent slopes, eroded	889	.2	Lee silt loam	1,592	.3
Allen gravelly sandy clay loam, 6 to 15 percent slopes, eroded	991	.2	Lobelville loam	7,912	1.6
Allen association, steep [1]	18,632	3.9	Locust silt loam, 0 to 2 percent slopes	4,802	1.0
Anniston loam, 2 to 6 percent slopes	996	.2	Locust silt loam, 2 to 6 percent slopes	4,422	.9
Anniston loam, 6 to 15 percent slopes	763	.2	Locust cherty silt loam, 2 to 6 percent slopes	5,846	1.2
Beason silt loam	1,776	.4	Masada slaty loam, 2 to 8 percent slopes	3,397	.7
Bodine cherty silt loam, 2 to 6 percent slopes	1,980	.4	McQueen silt loam, 0 to 2 percent slopes	6,187	1.3
Bodine cherty silt loam, 6 to 15 percent slopes	11,917	2.5	McQueen silt loam, 2 to 6 percent slopes	924	.2
Bodine stony loam, 15 to 45 percent slopes	8,417	1.8	Melvin silt loam	804	.2
Bremo slaty silt loam, 0 to 12 percent slopes	1,693	.3	Minvale cherty silt loam, 2 to 6 percent slopes	4,743	1.0
Cane fine sandy loam, 2 to 6 percent slopes	1,561	.3	Minvale cherty silt loam, 6 to 10 percent slopes	3,576	.7
Chewacla and Chenneby soils	20,151	4.2	Minvale-Bodine association, hilly [1]	41,291	8.6
Choccolocco silt loam	3,658	.8	Rock land-Hector-Townley association, steep [1]	1,755	.4
Clymer stony loam	2,885	.6	Slickens	227	(2)
Decatur loam, 0 to 2 percent slopes	862	.2	Sylacauga silt loam	2,416	.5
Decatur silt loam, 2 to 6 percent slopes	24,518	5.1	Talladega association, very steep [1]	3,300	.7
Decatur silty clay loam, 4 to 10 percent slopes, eroded	14,610	3.0	Tallapoosa-Tatum complex, 6 to 15 percent slopes	15,937	3.3
Decatur silty clay loam, 10 to 25 percent slopes, severely eroded	3,593	.7	Tallapoosa-Tatum association, hilly [1]	92,145	19.2
Dewey loam, 2 to 6 percent slopes	7,179	1.5	Tatum slaty loam, 2 to 6 percent slopes	2,401	.5
Dewey clay loam, 2 to 6 percent slopes, eroded	6,908	1.4	Tatum slaty loam, 6 to 10 percent slopes	7,194	1.5
Dewey clay loam, 6 to 10 percent slopes, eroded	14,488	3.0	Toccoa loams	5,834	1.2
Dewey clay loam, 10 to 25 percent slopes, severely eroded	4,142	.9	Townley gravelly loam, 2 to 6 percent slopes	2,758	.6
Dowellton silt loam	2,861	.6	Townley gravelly loam, 6 to 10 percent slopes	2,947	.6
Enders-Montevallo association, steep [1]	3,356	.7	Townley association, steep [1]	3,552	.7
Enders-Townley-Montevallo complex, 6 to 15 percent slopes	1,432	.3	Townley-Tatum complex, 6 to 10 percent slopes, eroded	1,373	.3
Fullerton cherty silt loam, 2 to 6 percent slopes	5,638	1.2	Urban land-Decatur complex	1,562	.3
Fullerton cherty silt loam, 6 to 10 percent slopes	19,412	4.0	Wickham fine sandy loam, terrace, 0 to 2 percent slopes	4,199	.9
Fullerton cherty silty clay loam, 6 to 15 percent slopes, eroded	6,608	1.4	Wickham fine sandy loam, terrace, 2 to 6 percent slopes	1,375	.3
Grasmere silty clay	8,620	1.8	Wickham slaty loam, 2 to 6 percent slopes	1,727	.4
			Wickham slaty loam, 6 to 10 percent slopes	1,708	.4
			Gravel and chert pits, mines and dumps [3]	2,601	.5
			Water	13,013	2.7
			Total	480,000	100.0

[1] Low intensity mapping units.
[2] Less than 0.1 percent.
[3] Shown as spot symbols on map.

many fine roots; 15 to 20 percent gravel; medium acid; clear, smooth boundary.

B1—4 to 9 inches, strong-brown (7.5YR 5/6) loam; weak fine, granular structure and weak, fine, subangular blocky; very friable; few fine and medium roots; patchy clay films; medium acid; clear, wavy boundary.

B21t—9 to 19 inches, yellowish-red (5YR 4/8) sandy clay loam; weak, medium, subangular blocky structure; friable; few fine roots; common, very thin, patchy clay films; few, small, black concretions; strongly acid; gradual, wavy boundary.

B22t—19 to 27 inches, red (2.5YR 4/8) clay loam; moderate, medium, subangular blocky structure; friable; few fine roots; continuous clay films; strongly acid; gradual, wavy boundary.

B23t—27 to 42 inches, red (2.5YR 4/6) clay loam; few, fine, distinct, yellowish-red mottles; moderate, fine, subangular blocky structure; friable; continuous clay films; 10 percent sandstone fragments; strongly acid; clear, wavy boundary.

B24t—42 to 60 inches, mottled red (10R 4/6), strong-brown (7.5YR 5/8), and very pale brown (10YR 7/4) clay loam; moderate, medium, subangular blocky structure; firm; patchy clay films; strongly acid.

The solum ranges from 60 to 80 or more inches in thickness. The depth to bedrock is 5 to 15 feet. Reaction is medium acid in the A and B1 horizons and strongly acid in the Bt horizon. Stones up to 25 feet in diameter cover 20 to 75 percent of the surface area. The A1 horizon ranges from very dark gray to dark grayish brown, except in eroded areas where it ranges from dark brown to yellowish red. The A horizon is gravelly or cobbly fine sandy loam and gravelly sandy clay loam. The B1 horizon ranges from strong brown to yellowish red and from fine sandy loam to clay loam. The B1 horizon is absent in some profiles. The B21t and B22t horizons range from yellowish red to red and from loam to sandy clay loam to clay loam. The B23t and B24t horizons range from yellowish red to dark red and in places are mottled with shades of brown and yellow. They are sandy clay loam to clay.

Allen soils are associated with Anniston, Cane, Dewey, Hector, Holston, Locust, and Montevallo soils. They are not so red nor so fine textured in the subsoil as Anniston soils. They do not have a fragipan, which is typical of Cane and Locust soils. They are much deeper over bedrock than Hector and Montevallo soils. They have a redder subsoil than Holston soils.

Allen cobbly fine sandy loam, 2 to 10 percent slopes (AcC).—This soil is on foot slopes. The surface layer is brown cobbly fine sandy loam 6 inches thick. The upper part of the subsoil is yellowish-red sandy clay loam. The lower part is red clay loam. Depth to bedrock is more than 5 feet.

Gravel and cobblestones one-half inch to 9 inches in diameter cover 25 to 75 percent of the surface. In places the subsoil is as much as 35 percent fragments, which occur as discontinuous pockets or layers.

Included with this soil in mapping are small areas of Cane, Holston, and Locust soils and soils having slopes of more than 10 percent. Also included are some stony areas; the stones are up to 25 feet in diameter.

The organic-matter content and the natural fertility are low. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

Gravel and cobblestones on the surface make this soil poorly suited to cultivated crops or pasture. The soil is very difficult to work and to prepare a seedbed. It is suited to woodland, especially pine trees. Fragments on the surface interfere with pasture management. Erosion is a slight to moderate hazard in tilled areas. Capability unit IVs–18; woodland group 3x8.

Allen gravelly fine sandy loam, 2 to 6 percent slopes (AgB).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas of Anniston, Cane, Dewey, Holston, and Locust soils, small areas that are not gravelly, and small areas where slopes are less than 2 percent.

This Allen soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is well suited to most crops commonly grown in the county. It is easy to work and can be tilled throughout a wide range of moisture content without clodding or crusting. In some small areas, gravel on the surface interferes with tillage. Erosion is a slight hazard in tilled areas. Capability unit IIe–3; woodland group 3o7.

Allen gravelly fine sandy loam, 6 to 10 percent slopes (AgC).—This soil has a plow layer of dark grayish-brown gravelly fine sandy loam 5 inches thick. The upper part of the subsoil is yellowish-red clay loam. The lower part is dark-red clay loam mottled with pale brown and strong brown. Depth to bedrock is more than 5 feet.

Included with this soil in mapping are small areas of Anniston, Cane, Holston, and Locust soils, a few small areas that are not gravelly, a few small gullies, and spots where the surface layer is yellowish-red sandy clay loam.

This Allen soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is suited to most crops grown in the county. Except in a few extremely gravelly areas, it is easy to work and can be tilled throughout a wide range of moisture content without clodding or crusting. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–10; woodland group 3o7.

Allen gravelly fine sandy loam, 10 to 15 percent slopes (AgD).—This is a moderately steep soil on foot slopes and slopes throughout the western part of the county. The plow layer is dark grayish-brown gravelly fine sandy loam 5 inches thick. The upper part of the subsoil is yellowish-red clay loam. The lower part is dark-red clay loam mottled with yellowish red and strong brown. Depth to bedrock is more than 5 feet.

Included with this soil in mapping are small areas of Anniston, Cane, Dewey, and Holston soils, small areas that are not gravelly, and small areas where the combined thickness of the surface layer and subsoil is less than 60 inches.

This Allen soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium.

The steep slope, high erosion hazard, and gravelly surface layer make this soil poorly suited to row crops. The use of mechanized farm equipment is limited. The soil is suited to pasture and to woodland. Capability unit IVs–18; woodland group 3o7.

Allen gravelly sandy clay loam, 2 to 6 percent slopes, eroded (AlB2).—This soil has a plow layer of brown gravelly sandy clay loam 4 inches thick. The upper part of the subsoil is yellowish-red clay loam about 20 inches thick. The lower part is yellowish-red clay loam mottled

with yellowish brown and brownish yellow. It is more than 30 inches thick. Depth to bedrock is more than 5 feet.

Included with this soil in mapping are small areas of Cane, Holston, and Locust soils and areas where the surface layer is fine sandy loam, sandy loam, loam, or clay loam. Also included are a few shallow and deep gullies, many old gully scars, and terrace remnants, all of which occur in most fields.

This Allen soil is low in natural fertility and organic-matter content. Water enters this soil slowly but moves through it at a moderate rate. The available water capacity is medium.

This soil is suited to most crops grown in the county. It is well suited to pasture and woodland. The soil is difficult to work and to prepare a seedbed. Tillage is restricted to only a narrow range of moisture content. Clods and crusts form if the soil is tilled when too wet. The erosion hazard is moderate in tilled areas. Capability unit IIIe–13; woodland group 3o7.

Allen gravelly sandy clay loam, 6 to 15 percent slopes, eroded (AlD2).—This soil is on foot slopes and high stream terraces throughout the county. It has a surface layer of yellowish-red gravelly sandy clay loam 2 inches thick. The upper part of the subsoil is red sandy clay loam 30 inches thick. The lower part is dark-red clay loam about 30 inches thick. Depth to bedrock is more than 5 feet.

Included with this soil in mapping are small areas of Anniston, Cane, and Dewey soils, areas where the surface layer is clay loam and fine sandy loam, and small areas where slopes are more than 15 percent. Also included are old terrace remnants and gully scars, which are common in most old fields, and a few shallow and deep gullies.

This Allen soil is low in natural fertility and organic-matter content. Water enters this soil slowly but moves through it at a moderate rate. The available water capacity is medium.

Moderately steep slopes and a high erosion hazard make this soil poorly suited to cultivated crops. The soil is suited to pasture and woodland. It is difficult to work and to prepare a seedbed, and it can be tilled within only a narrow range of moisture content. Clods and crusts form if the soil is tilled when wet. Capability unit IVe–16; woodland group 3o7.

Allen association, steep (AnE).—These soils are on hillsides and toe slopes, mainly in the central part of the county. Slopes range from 10 to 50 percent but are dominantly 20 to 30 percent. Stones, 1 to 25 feet in diameter, cover about 20 to 75 percent of the surface. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

Allen soils make up about 85 percent of the association, and soils of minor extent make up the remaining 15 percent.

Allen soils have a surface layer of dark grayish-brown or brown fine sandy loam 10 inches thick. The subsoil, about 60 inches thick, is red sandy clay loam that grades to clay loam with increasing depth. The lower part of the subsoil is mottled with light yellowish brown and pale brown. Depth to bedrock is more than 5 feet. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

Less extensive in this association are the Anniston, Cane, Hector, Holston, and Montevallo soils. Hector and Montevallo soils are on the narrow ridgetops and peaks and on the upper part of the hillsides. Cane soils are mainly on toe slopes near the foot of the hills. Anniston and Holston soils occur throughout the association.

Steep slopes, an erosion hazard, and the large number of stones on the surface make these soils very poorly suited to cultivated crops and pasture. The soils are well suited to woodland, especially pine. In most areas the stones hamper the use of mechanized equipment. Harvesting is difficult where slopes are more than 25 percent. Capability unit VIIe–22; woodland group 3x8.

Anniston Series

The Anniston series consists of deep, well-drained soils. These soils are on foot slopes, benches, and high terraces in the valley section of the county. They formed in local alluvium and colluvium that was transported from soils derived from sandstone, shale, and quartzite.

In a representative profile the surface layer is dark reddish-brown loam about 4 inches thick. The next 4 inches is mixed dark reddish-brown and dark-red loam or clay loam. The thick, dark-red subsoil is friable clay loam in the uppermost 18 inches, friable to firm clay loam in the next 28 inches, and friable to firm clay in the lowermost 18 inches.

Anniston soils are widely distributed in the western part of the county but have a small total acreage. The native vegetation is mixed hardwoods and pine. About 65 percent of the acreage has been cleared and is used for crops or pasture.

Representative profile of Anniston loam, 2 to 6 percent slopes, in an idle field 0.55 mile north of north gate boundary of Coosa River Ordinance Works (subdepot) and 30 feet east of road, NE¼SE¼ sec. 31, T. 17 S., R. 6 E.:

Ap—0 to 4 inches, dark reddish-brown (5YR 3/4) loam; weak, fine, granular structure; very friable; many fine roots; few quartz pebbles; few sandstone cobblestones; strongly acid; abrupt, smooth boundary.

AB—4 to 8 inches, 60 percent dark reddish-brown (5YR 3/4) and 40 percent dark-red (2.5YR 3/6) loam or clay loam; weak, fine, granular structure and weak, fine, subangular blocky structure; very friable; many fine roots; few, small, black concretions; few sandstone cobblestones; some peds have black coatings; strongly acid; clear, smooth boundary.

B21t—8 to 26 inches, dark-red (2.5YR 3/6) clay loam; weak, fine, subangular blocky structure; friable; common fine and medium roots; common, thin, patchy clay films; common, small, black concretions; few soft sandstone fragments 2 to 6 inches in diameter; strongly acid; gradual, smooth boundary.

B22t—26 to 54 inches, dark-red (2.5YR 3/6) clay loam; moderate, medium, subangular blocky structure; friable to firm; few fine roots; many, thin, patchy clay films; common, small, black concretions; few soft sandstone fragments 2 to 6 inches in diameter; strongly acid; gradual, smooth boundary.

B23t—54 to 72 inches, dark-red (2.5YR 3/6) clay; moderate, medium, subangular and angular blocky structure; friable to firm; thin continuous clay films on peds; common, small, black concretions; few soft sandstone fragments 2 to 6 inches in diameter; strongly acid.

The solum ranges from 70 to 90 inches in thickness. Depth to bedrock is more than 6 feet. Reaction is strongly acid throughout. The A horizon ranges from dark brown to dark reddish brown. It is 3 to 8 inches thick. The B horizon is dark red. The B21t horizon is sandy clay or clay loam. Below a depth of about 30 inches, the texture is clay loam or clay.

Anniston soils are associated with Allen, Cane, Decatur, Dewey, Holston, Locust, and Minvale soils. They are redder and finer textured in the subsoil than Allen, Holston, and Minvale soils. They are redder than Dewey soils. They are not so fine textured in the subsoil as Decatur soils. They do not have a fragipan as do Cane and Locust soils.

Anniston loam, 2 to 6 percent slopes (AsB).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas where the surface layer is gravelly loam or silt loam and small areas where the subsoil is sandy clay loam. Also included are areas of Allen, Cane, and Holston soils.

This Anniston soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through the profile at a moderate rate. The available water capacity is medium to high.

This soil has a wide range of suitability for crops and is well suited to most of the crops grown in the county. It is easy to work and can be tilled throughout a wide range of moisture content. The erosion hazard is slight in tilled areas. Capability unit IIe–4; woodland group 3o7.

Anniston loam, 6 to 15 percent slopes (AsD).—This soil has a surface layer of dark reddish-brown loam 6 inches thick. The upper part of the subsoil, about 42 inches thick, is dark-red clay loam. The lower part of the subsoil, about 2 feet thick, is dark-red clay.

Included with this soil in mapping are small areas where the surface layer is gravelly loam or silt loam, small areas where the subsoil is sandy clay loam, and small areas where slopes are more than 15 percent. Also included are small areas of Allen, Cane, and Holston soils.

This Anniston soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium to high.

This soil has a wide range of suitability for crops and is suited to all crops grown in the county. It can be tilled throughout a wide range of moisture content. The slope limits the use of mechanized equipment to some extent. Erosion is a moderate to high hazard in tilled areas. Capability unit IIIe–11; woodland group 3o7.

Beason Series

The Beason series consists of deep, somewhat poorly drained, nearly level soils. These soils formed in old general alluvium on stream terraces and on large upland flats. They have a seasonal high water table at a depth of 12 to 24 inches and are susceptible to very frequent flooding or to ponding of brief duration.

In a representative profile the surface layer is very dark gray silt loam 3 inches thick. The subsurface layer is 5 inches of pale-brown silt loam mottled with light yellowish brown and very dark gray; the next 3 inches is pale-brown silt loam. The subsoil is 8 inches of firm, yellowish-brown clay; 20 inches of mottled light yellowish-brown, yellowish-brown, and light-gray and strong-brown clay. The underlying material is firm, yellowish-brown clay mottled with light brownish gray.

These soils are widely distributed throughout the western part of the county. About half the acreage is cleared and is used for pasture, soybeans, or corn. Some areas are idle or have been reforested to pine. The native vegetation is mixed hardwoods and a few scattered pine.

Representative profile of Beason silt loam (0 to 2 percent slopes) in a recently cleared area one-half mile east of Embry's Crossroad exit on Interstate Highway No. 20 and 20 feet south of section line, NE¼NW¼ sec. 6, T. 17 S., R. 5 E.:

A1—0 to 3 inches, very dark gray (10YR 3/1) silt loam; weak, fine, granular structure; very friable; common fine and medium roots; very strongly acid; clear, smooth boundary.

A2—3 to 8 inches, pale-brown (10YR 6/3) silt loam; many, fine, distinct, light yellowish-brown and very dark gray mottles; weak, fine, granular structure; very friable; common fine and medium roots; very strongly acid; clear, wavy boundary.

A3—8 to 11 inches, pale-brown (10YR 6/3) silt loam; weak, fine, granular structure and weak, fine, subangular blocky structure; friable; few fine and medium roots; very strongly acid; clear, wavy boundary.

B21t—11 to 19 inches, yellowish-brown (10YR 5/4) clay; moderate, fine, subangular blocky structure; firm; few fine and medium roots; many, thin, patchy clay films on ped surfaces; few small chert fragments; very strongly acid; clear, wavy boundary.

B22t—19 to 39 inches, mottled light yellowish-brown (10YR 6/4), yellowish-brown (10YR 5/6), and light-gray (10YR 6/1) clay; moderate, thick, platy structure; firm; thin continuous clay films on ped surfaces; few small chert fragments; very strongly acid; gradual, wavy boundary.

B3t—39 to 54 inches, mottled light yellowish-brown (10YR 6/4), yellowish-brown (10YR 5/6), light-gray (10YR 6/1), and strong-brown (7.5YR 5/6) clay; weak, medium, subangular blocky structure; firm; patchy thin clay films; few small chert fragments; very strongly acid; gradual, wavy boundary.

C—54 to 66 inches, yellowish-brown (10YR 5/6) clay; common, medium, distinct, light brownish-gray mottles; platy rock structure; very firm; few small chert fragments; very strongly acid.

The solum ranges from 50 to 70 inches in thickness. Depth to bedrock is more than 5 feet. Reaction is very strongly acid throughout. The A1 horizon ranges from very dark gray to dark grayish brown and is 2 to 5 inches thick. The A2 or Ap horizon ranges from pale brown to dark brown and normally is mottled with gray. The B2t horizon is yellowish brown to light olive brown and has few to common gray mottles. It is silty clay to clay. The B3t horizon generally is mottled with shades of gray, brown, and yellow, or it has a dominant gray matrix color and brown, yellow, and olive mottling. It is silty clay or clay. The C horizon ranges from yellowish brown to light gray and generally is mottled. It ranges from silty clay loam to clay.

Beason soils are associated with Leadvale, Guthrie, Dowellton, McQueen, Chewacla, and Chenneby soils. They are more poorly drained than Leadvale soils and do not have a fragipan. They are better drained than Guthrie soils. They are not so red in the subsoil nor so well drained as McQueen soils. They are more clayey than Chewacla and Chenneby soils.

Beason silt loam (Be).—This is the only Beason soil mapped in the county. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Guthrie, Dowellton, and Leadvale soils, areas where bedrock is at a depth of 20 to 40 inches and limestone crops out in a few places, and a few areas where the surface layer is loam or silty clay loam.

This Beason soil is low in natural fertility and organic-matter content. Infiltration and permeability are slow. The available water capacity is high.

This soil is poorly suited to most cultivated crops grown in the county because drainage is somewhat poor, flooding is a hazard, and water ponds on the surface. The soil is well suited to pasture and trees, and if drained, to cultivated crops. There is no erosion hazard, except where floods cause scouring. Capability unit IIIw–14; woodland group 3w9.

Bodine Series

The Bodine series consists of deep, well-drained, gently sloping to steep, cherty soils. These soils formed in residuum from cherty limestone on uplands.

In a representative profile the surface layer is covered with a 1 inch layer of fresh and partly decayed leaves. The surface layer is 2 inches of very dark gray cherty silt loam. The next 4 inches is brown cherty silt loam. The uppermost 19 inches of the friable subsoil is yellowish-brown cherty loam; the next 14 inches is strong-brown to yellowish-red cherty clay loam; the next 11 inches is firm, yellowish-red cherty clay loam mottled with brownish yellow; and the lowermost layer is firm, mixed yellowish-red and strong-brown cherty clay loam 10 inches thick.

Bodine soils are widely distributed throughout the western part of the county and make up a large total acreage. About 85 percent of the acreage is woodland. The cleared areas are mostly idle, but a few areas are used for crops and pasture. The native vegetation is mixed hardwoods and a few pine.

Representative profile of Bodine cherty silt loam, 6 to 15 percent slopes, on a wooded hillside one-half mile east on U.S. Highway No. 78 from junction of 78 and Alabama Highway No. 77, one-half mile southeast on a farm-market road, three-eighths of a mile east on Southern Natural Gas Pipeline, and 20 feet south of pipeline, SW¼NE¼ sec. 24, T. 16 S., R. 5 E.:

O1—1 inch to 0, fresh and partly decayed oak and hickory leaves.

A1—0 to 2 inches, very dark gray (10YR 3/1) cherty silt loam; weak, fine, granular structure; very friable; many fine and few medium roots; medium acid; clear, smooth boundary.

A2—2 to 6 inches, brown (10YR 5/3) cherty silt loam; weak, fine, granular structure; very friable; common fine and few medium roots; some mixing from A1 horizon; medium acid; clear, wavy boundary.

B21t—6 to 25 inches, yellowish-brown (10YR 5/6) cherty loam; weak, medium, subangular blocky structure; very friable; few fine and medium roots; patchy clay films; 50 to 60 percent chert fragments less than 6 inches in diameter; strongly acid; gradual, wavy boundary.

B22t—25 to 39 inches, strong-brown (7.5YR 5/6) to yellowish-red (5YR 5/8) cherty clay loam; weak to moderate, medium, subangular blocky structure; firm to friable; patchy clay films; 40 to 50 percent chert fragments less than 6 inches in diameter; very strongly acid; gradual, wavy boundary.

B23t—39 to 50 inches, yellowish-red (5YR 4/6) cherty clay loam; common, medium, distinct, brownish-yellow mottles; weak to moderate, medium, subangular blocky structure; firm; patchy clay films; 40 to 50 percent chert fragments less than 6 inches in diameter; strongly acid; gradual, irregular boundary.

B24t—50 to 60 inches, mixed yellowish-red (5YR 5/8) and strong-brown (7.5YR 5/6) cherty clay loam; weak, medium and coarse, subangular blocky structure; firm; compact in places; patchy clay films; more than 75 percent chert fragments one-half inch to 10 inches in diameter; strongly acid.

The solum ranges from 60 to 80 or more inches in thickness. Depth to bedrock ranges from 5 to 10 feet. Reaction is medium acid in the A horizon, strongly acid in the B21t horizon, very strongly acid in the B22t horizon, and strongly acid below the B22t horizon. The soil is more than 35 percent chert fragments larger than 2 millimeters in diameter. The A1 horizon ranges from very dark gray to dark grayish brown and is 2 to 5 inches thick. The A2 or Ap horizon ranges from dark brown to light yellowish brown and is 4 to 12 inches thick. The A horizon ranges from cherty loam or silt loam to stony loam or silt loam. The upper part of the subsoil ranges from strong brown to light yellowish brown and is cherty loam or clay loam. The lower part of the subsoil normally ranges from yellowish brown to yellowish red and has few to many mottles in shades of red, brown, and yellow, and in places it is mottled in shades of brown, red, and yellow. It is cherty loam or cherty clay loam of 35 to 80 percent chert content.

In some areas the soil is less than 35 percent chert fragments, but this difference does not alter its usefulness or behavior.

Bodine soils are on hillsides and narrow ridges in association with Dewey, Fullerton, Locust, and Minvale soils. They are not so red nor so fine textured in the subsoil as Dewey and Fullerton soils. They are more cherty than Minvale soils. They do not have a fragipan as do Locust soils.

Bodine cherty silt loam, 2 to 6 percent slopes (BhB).—This soil is on narrow, cherty ridgetops in the limestone valley section of the county.

This soil has a surface layer of brown cherty silt loam 6 inches thick. The upper part of the subsoil, about 18 inches thick, is light yellowish-brown and yellowish-brown cherty loam. The lower part of the subsoil, thicker than 3 feet, is yellowish-brown and strong-brown cherty clay loam mottled with red and pale brown. The content of chert is about 50 percent. Depth to bedrock is more than 5 feet.

Included with this soil in mapping are small areas of Fullerton, Locust, and Minvale soils. Also included are a few areas in the vicinity of Munford and Jennifer where the upper part of the subsoil is only 10 to 20 percent chert fragments.

This Bodine soil is low in natural fertility and organic-matter content. Water enters this soil readily and moves through the profile at a moderately rapid rate. The available water capacity is low, and at times plants are damaged from lack of water during short periods of drought.

This soil is fairly well suited to most crops grown in the county. It is suited to pasture and to woodland. The large number of chert fragments on the surface (fig. 6) interferes with tillage, especially when the soil is dry. Erosion is a slight hazard in tilled areas. Capability unit IIs–9; woodland group 3f8.

Bodine cherty silt loam, 6 to 15 percent slopes (BhD).—This soil is on narrow ridgetops and hillsides in the limestone section of the county. It has the profile described as representative of the series.

Included with this soil in mapping are small areas of Bodine stony loam, areas of Fullerton, Locust, and Minvale soils, and areas where the upper part of the subsoil is 10 to 15 percent chert fragments.

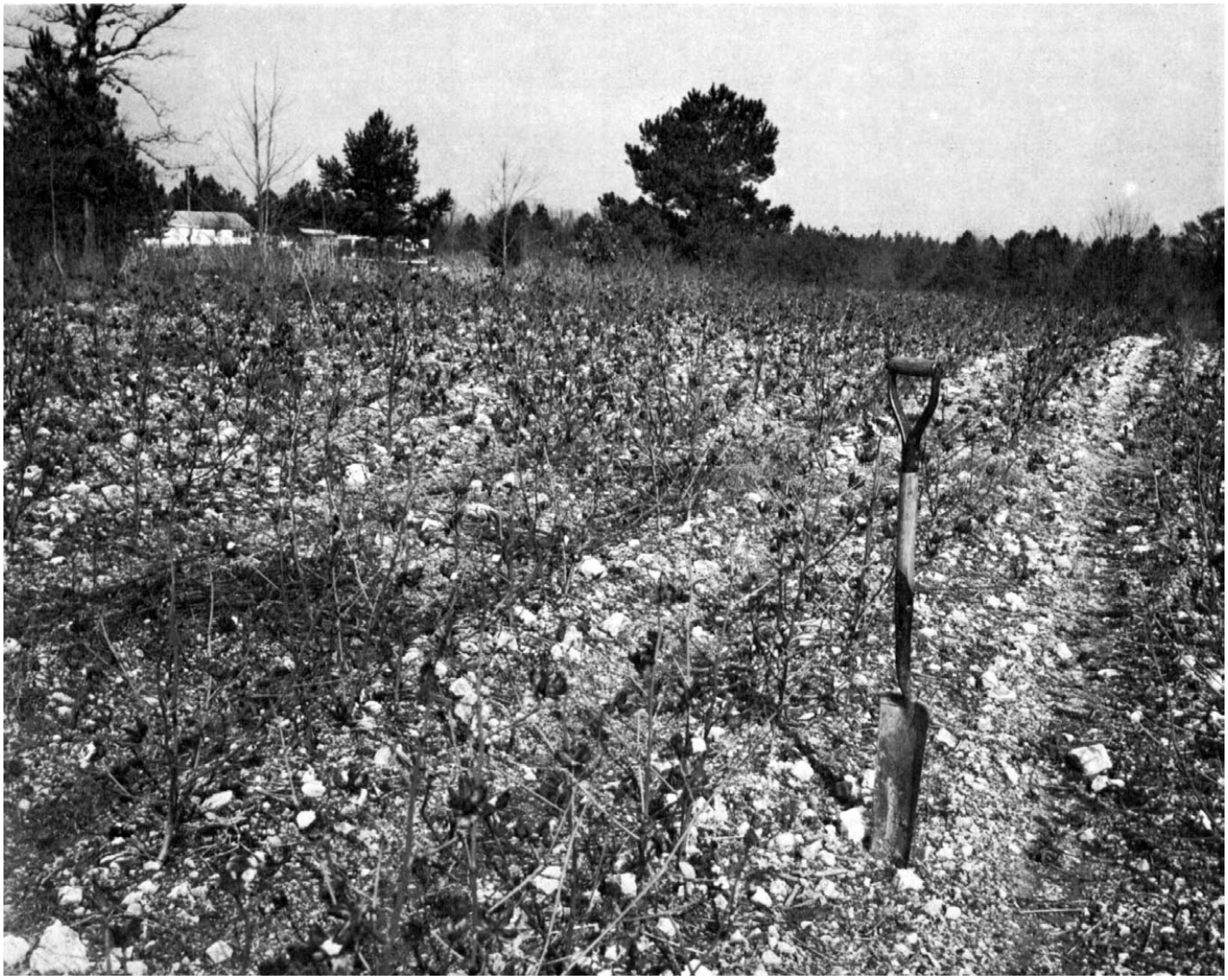


Figure 6.—**Bodine cherty silt loam, 2 to 6 percent slopes. Fragments on surface interfere with tillage.**

This Bodine soil is low in natural fertility and organic-matter content. Infiltration is rapid, and permeability is moderately rapid. The available water capacity is low, and at times during short periods of drought, plants are damaged from lack of water.

The steep slopes, high erosion hazard, large amount of chert on the surface and in the profile, and low available water capacity make this soil poorly suited to cultivated crops. The soil is suited to pasture and is well suited to woodland. The irregular shape and complex slopes make tilling with mechanized equipment difficult. Capability unit IVs–18; woodland group 3f8.

Bodine stony loam, 15 to 45 percent slopes (BmE).—This is a very cherty soil on hillsides in the limestone section of the county. It has a surface layer of very dark gray stony loam 3 inches thick and a subsurface layer of pale-brown cherty silt loam about 7 inches thick. The upper part of the subsoil, about 20 inches thick, is yellowish-brown cherty loam that is 35 to 50 percent chert fragments. The lower part, over 30 inches thick, is yellowish-brown cherty clay loam mottled with strong brown and yellowish red. The chert content of this horizon ranges from 50 to 75 percent. Depth to bedrock is more than 5 feet. Coarse chert and stones on the surface range from 3 to 24 inches in size and cover 15 to 60 percent of the surface.

Included with this soil in mapping are small areas of Bodine, Fullerton, and Minvale soils; and areas about 15 percent of the acreage, where the upper part of the subsoil is 15 to 35 percent chert fragments. Limestone rock crops out over much of the area.

This Bodine soil is low in natural fertility and organic-matter content. Infiltration is rapid, and permeability is moderately rapid. The available water capacity is low, and at times during short periods of drought plants are damaged from lack of water.

Steep slopes, a very high erosion hazard, and a large number of chert fragments and stones on the surface make this soil unsuited to cultivated crops and poorly suited to pasture. The soil is suited to woodland, but stones and rock outcrops interfere with harvesting in most areas. Capability unit VIIs–23; woodland group 3x8.

Bremo Series

The Bremo series consists of shallow, well-drained soils on uplands. These soils formed in residuum derived from schist. Slopes range from 0 to 12 percent.

In a representative profile the surface layer is very dark grayish-brown slaty silt loam that is 3 inches thick and 35 percent slate and schist fragments. The subsurface layer is 4 inches of dark grayish-brown slaty silt loam that is 35 percent slate and schist fragments. The subsoil is 11 inches of firm, olive-brown slaty silt loam mottled with light yellowish brown and light brownish gray. This layer is 50 percent soft and hard schist fragments. At a depth of 18 inches is green schist that is hard to break.

Bremo soils are in the Chandler Springs community in the eastern part of the county. The total acreage is small. Most areas are wooded. The native vegetation is scrub hardwoods and a few pine. There is a dense understory of crabapple, dogwood, huckleberry bushes, and blackberry briers.

Representative profile of Bremo slaty silt loam, 0 to 12 percent slopes, on a broad ridgetop 990 feet east of Chandler Springs School on a gravel road and 30 feet south of road SW¼NW¼ sec. 10, T. 20 S., R. 6 E.:

A1—0 to 3 inches, very dark grayish-brown (10YR 3/2) slaty silt loam; weak, fine, granular structure; friable; many fine and medium roots; 35 percent slate and schist fragments less than 1 inch in diameter; very strongly acid; clear, smooth boundary.

A2—3 to 7 inches, dark grayish-brown (2.5Y 4/2) slaty silt loam; weak, fine, granular structure; friable; many fine and medium roots; 35 percent slate and schist fragments less than 1 inch in diameter; very strongly acid; clear, smooth boundary.

B2—7 to 18 inches, light olive-brown (2.5Y 5/4) slaty silt loam; common, fine, light yellowish-brown and few, fine, light brownish-gray mottles; moderate, medium, subangular blocky structure; firm; 50 percent soft and hard schist fragments; few fine roots; few, thin, patchy clay films on some ped surfaces; very strongly acid; abrupt, irregular boundary.

R—18 inches +, green schist, hard to break.

Depth to bedrock is 16 to 24 inches. The reaction is very strongly acid throughout the profile. The A1 horizon ranges from very dark gray to very dark grayish brown and is 1 to 5 inches thick. The A2 or Ap horizon ranges from dark grayish brown to yellowish brown and is 4 to 10 inches thick. The B horizon ranges from strong brown to light olive brown mottled in places with shades of brown and gray. It is loam or clay loam that is more than 35 percent fragments larger than 2 millimeters in diameter. Bedrock is schist.

Bremo soils are associated with Chenneby, Chewacla, and Tatum soils. They are not so deep as those soils.

Bremo slaty silt loam, 0 to 12 percent slopes (BrC).—This is the only Bremo soil mapped in the county. It has the profile described as representative of the series.

Included with this soil in mapping are small areas of Tallapoosa and Tatum soils, small areas that are extremely rocky, and soils that have a clayey, sticky and plastic subsoil.

This Bremo soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is low, and at times during short periods of drought plants are damaged from lack of water.

Fragments on the surface and the shallowness make this soil very poorly suited to cultivated crops. The soil is fairly well suited to pasture. It is suited to woodland. Capability unit IVs–18; woodland group 4o1.

Cane Series

The Cane series consists of deep, moderately well drained soils that have a fragipan in the lower part of the subsoil. These soils are gently sloping and are on uplands and stream terraces. They formed in colluvium, valley fill, or alluvial material from sandstone, shale, or cherty limestone.

In a representative profile the surface layer is brown to dark-brown fine sandy loam 5 inches thick. The uppermost part of the subsoil is 21 inches of friable, yellowish-red loam; the next 20 inches, the fragipan, is yellowish-red clay loam mottled with red; the next 14 inches of the fragipan is mottled yellowish-red, red, and brownish-yellow clay loam. The fragipan is firm and compact. Below the fragipan is 15 inches of mottled clay loam.

About three-fourths of the acreage has been cleared and is used for crops and pasture. The native vegetation is mixed southern hardwoods and pine.

Representative profile of Cane fine sandy loam, 2 to 6 percent slopes, in an idle field about one-half mile north of Coosa River Bridge on Interstate Highway No. 20, SE¼NE¼ sec. 35, T. 16 S., R. 4 E.:

Ap—0 to 5 inches, brown to dark-brown (7.5YR 4/4) fine sandy loam; weak, fine, granular structure; very friable; many fine roots; common small pebbles and black concretions; strongly acid; abrupt, smooth boundary.

Bt—5 to 26 inches, yellowish-red (5YR 5/6) loam; weak and moderate, medium, subangular blocky structure; friable; few fine roots; thin patchy clay films on peds; few, small, black concretions; strongly acid; gradual boundary.

Bx1—26 to 46 inches, yellowish-red (5YR 4/6) clay loam; few, medium, distinct, red mottles; weak coarse polyhedrons breaking to moderate, medium, blocky structure; firm; compact and brittle; many, thin, patchy clay films; many fine pores lined with clay; light-gray (10YR 7/2) and brownish-yellow (10YR 6/6) silt loam in cracks between polyhedrons; few small pebbles; few small manganese concretions; very strongly acid; gradual, wavy boundary.

Bx2—46 to 60 inches, mottled yellowish-red (5YR 5/8), red (2.5YR 4/6), and brownish-yellow (10YR 6/6) clay loam; weak, coarse polyhedrons breaking to weak, coarse, blocky structure; firm; compact and brittle; thin continuous clay films on peds; common fine pores lined with clay; light-gray (10YR 7/2) silt loam in cracks between polyhedrons; few small chert and quartzite fragments; very strongly acid; gradual, wavy boundary.

B3—60 to 75 inches, mottled brownish-yellow (10YR 6/6), light-gray (10YR 7/1), yellowish-red (5YR 5/6), red (2.5YR 4/6), and light yellowish-brown (2.5Y 6/4) clay loam; moderate, medium and coarse, subangular blocky structure; firm; thin patchy clay films on most peds; very strongly acid.

Depth to bedrock is 6 to 8 feet, and depth to the fragipan is 20 to 35 inches. Reaction is strongly acid in the A and Bt horizons and very strongly acid in the Bx and B3 horizons. The Ap horizon ranges from brown to reddish brown and is 4 to 10 inches thick. The Bt horizon ranges from strong brown to red. It is loam or clay loam. The fragipan ranges from strong brown to yellowish red mottled with brown, gray, and red. In places it has no matrix color and is mottled with shades of brown, red, and gray. The fragipan is loam or clay loam and generally is less clayey than the Bt horizon. The B3 horizon is mottled with shades of brown, red, and gray. It is clay loam or clay.

Cane soils are associated with Allen, Dewey, Lobelville, and Locust soils. They are not so fine textured in the subsoil as Dewey soils. In contrast with Allen soils, they have a fragipan. They are redder in the subsoil than Locust and Lobelville soils.

Cane fine sandy loam, 2 to 6 percent slopes (CbB).—This is the only Cane soil mapped in the county. It has the profile described as representative of the series.

Included with this soil in mapping are small areas of Allen and Locust soils; areas, about 15 percent of the acreage, where the fragipan is below 36 inches; and areas, 10 to 15 percent of the acreage, where slopes are 6 to 10 percent.

This Cane soil is low in natural fertility and organic-matter content. Infiltration is medium. Permeability is moderate in the upper part of the subsoil and low in the fragipan. The available water capacity is medium.

This soil is suited to most crops grown in the county. It is easy to work and can be tilled throughout a fairly wide range of moisture content. The erosion hazard is slight to moderate in tilled areas. Capability unit IIe–5; woodland group 3o7.

Chenneby Series

The Chenneby series consists of deep, somewhat poorly drained, nearly level soils. These soils are on first bottoms and are widely distributed throughout the county. They formed in alluvium from sandstone, shale, limestone, and slate.

In a representative profile the surface layer is mixed brown, dark grayish-brown, and brown silt loam 16 inches thick. The subsoil is mixed brown and dark-brown silt loam in the uppermost 8 inches; friable, dark grayish-brown silt loam mottled with gray and dark gray in the next 12 inches; and friable, dark-gray silt loam or silty clay loam mottled with olive gray in the lowermost 19 inches. The underlying material, 17 inches thick, is friable to firm, gray silty clay loam mottled with olive.

About half the acreage has been cleared and is used for crops or pasture. The native vegetation is mixed bottom land hardwoods and a few pine.

Representative profile of Chenneby silt loam, 0 to 2 percent slopes, in a wooded bottom, 2 miles west of McElderry and 75 feet north of farm-market road, NW¼SE¼ sec. 3, T. 18 S., R. 6 E.:

A11—0 to 3 inches, mixed brown (10YR 4/3), dark grayish-brown (10YR 4/2), and grayish-brown (10YR 5/2) silt loam; structureless (massive); friable; many fine and medium roots; very strongly acid; clear, smooth boundary.

A12—3 to 16 inches, brown (10YR 4/3) silt loam; common, fine, faint, dark-brown and few, fine, distinct, light yellowish-brown mottles; weak, fine, granular structure; friable; many fine and medium roots; strongly acid; clear, wavy boundary.

B1—16 to 24 inches, mixed brown (10YR 4/3) and dark-brown (7.5YR 4/4) silt loam; common, fine, distinct, light brownish-gray mottles; weak, fine, granular structure and weak, medium, subangular blocky structure; friable; common fine roots; very strongly acid; clear, wavy boundary.

B21—24 to 36 inches, dark grayish-brown (10YR 4/2) silt loam; common, medium, distinct, gray and dark-gray mottles; weak, medium, subangular blocky structure; friable; few fine roots; few small quartz pebbles; very strongly acid; gradual, wavy boundary.

B22—36 to 55 inches, dark-gray (5Y 4/1) silt loam or silty clay loam; common, medium, faint, olive-gray mottles; weak, medium, subangular blocky structure; friable; few fine roots; few small quartz pebbles; very strongly acid; gradual, wavy boundary.

C—55 to 72 inches, gray (5Y 5/1) silty clay loam; common, fine, olive mottles; structureless (massive); friable to firm; few fine roots; few quartz pebbles; very strongly acid.

The solum ranges from 40 to 60 or more inches in thickness. Depth to rock is 5 to 8 feet. Mica flakes in the solum range from none to common. Reaction is strongly acid in the A horizon and very strongly acid in the B and C horizons. The A11 horizon ranges from very dark gray to brown and in places is mottled. The A12 or Ap horizon ranges from yellowish red to brown. The upper part of the B horizon is brown, dark brown, or yellowish red and has few to common gray mottles. The amount of gray increases with increasing depth. The lower part of the B horizon is dominantly gray or dark gray and has common to many brown, yellow, or olive mottles. The B horizon is silt loam or silty clay loam. The C horizon is extremely variable, ranging from gray silty clay loam to stratified layers of sand and gravel.

Chenneby soils are associated with Chewacla, Lee, Lobelville, and Toccoa soils. They are more silty than Chewacla and Lobelville soils. They are finer textured than Toccoa soils. They are better drained than Lee soils. They have less profile development and are more poorly drained than Choccolocco, McQueen, and Wickham soils.

In this county Chenneby soils are mapped only with Chewacla soils. The Chewacla soils are described under the heading "Chewacla Series."

Chewacla Series

The Chewacla series consists of deep, somewhat poorly drained, nearly level soils. These soils are on first bottoms and are widely distributed throughout the county. They formed in alluvium derived from sandstone, shale, limestone, and slate.

In a representative profile the surface layer is mottled brown and pale-olive silt loam 6 inches thick. The subsoil in the uppermost 18 inches is friable, yellowish-brown gravelly silt loam that has a few pale-olive and light olive-gray mottles; it is mottled yellowish-brown, dark yellowish-brown and light-gray loam in the next 16 inches; and mottled light-gray and brown gravelly sandy loam in the lowermost 13 inches. The underlying material is 7 inches of brown, stratified sand and gravel.

About 50 percent of the acreage has been cleared and is used for crops or pasture. The native vegetation is mixed bottom land hardwoods and a few pine.

Representative profile of Chewacla silt loam, 0 to 2 percent slopes, in narrow bottom three-fourths of a mile southwest from Tallageda-Calhoun county line on Alabama Highway No. 21, 3 miles east on farm-to-market road, 3 miles south on gravel road to Ducknest Springs, 2¼ miles west on gravel road, and 50 feet south of road, SW¼NE¼ sec. 36, T. 17 S., R. 5 E.:

Ap—0 to 6 inches, mottled brown (10YR 4/3) and pale-olive (5Y 6/3) silt loam; weak, fine, granular structure;

friable; many fine grass roots; few black concretions; very strongly acid; abrupt, smooth boundary.

B21—6 to 24 inches, yellowish-brown (10YR 5/4) silt loam; distinct, pale-olive and few, fine, faint, light olive-gray mottles; weak, medium, subangular blocky structure; friable; few fine roots; 15 percent small pebbles; water table at a depth of 12 inches; very strongly acid; gradual, wavy boundary.

B22—24 to 40 inches, mottled yellowish-brown (10YR 5/4), dark yellowish-brown (10YR 4/4), and light-gray (5Y 6/1) loam; weak, medium, subangular blocky structure; friable; few manganese concretions; 10 percent small pebbles; very strongly acid; gradual, irregular boundary.

B3—40 to 53 inches, mottled light-gray (10YR 6/1) and brown (10YR 5/3) gravelly sandy loam; massive; very friable; very strongly acid; gradual, irregular boundary.

C—53 to 60 inches, brown (10YR 5/3) sand and gravel, stratified and layered.

The solum ranges from 40 to 60 or more inches in thickness. Reaction is very strongly acid throughout. The A horizon ranges from reddish brown to yellowish brown to dark grayish brown. In places it is mottled with shades of olive and yellow and is 6 to 20 inches thick. It is fine sandy loam to silty clay loam. The upper part of the B horizon is yellowish brown, brown, and dark brown and has few to common gray mottles. The amount of gray increases with increasing depth. The lower part of the B horizon generally is mottled gray and brown or it has a dominant gray matrix color and common to many brown, yellow, and olive mottles. The B horizon ranges from fine sandy loam to clay loam. The gravel content is 0 to 30 percent. The C horizon is variable, ranging from stratified layers of sand and gravel to massive clayey material.

Chewacla soils are associated with Chenneby, Dowellton, Lee, and Toccoa soils. They are less silty than Chenneby soils, and they are finer textured than Toccoa soils. They are better drained than Dowellton and Lee soils. They do not have the profile development of the Choccolocco, McQueen, and Wickham soils. They are on first bottoms adjacent to Choccolocco, McQueen, and Wickham soils on stream terraces.

In this county the Chewacla soils are mapped only with Chenneby soils. The Chenneby soils are described under the heading "Chenneby Series."

Chewacla and Chenneby soils (Cc).—These are the only Chenneby and Chewacla soils mapped in the county. They have the profiles described as representative of their respective series. Slopes are 0 to 2 percent..

These soils are on narrow first bottoms and at the heads of and along small drainageways. These areas are widely distributed throughout the county. The total acreage is large. The soils formed from material that washed from soils derived from sandstone, shale, limestone, and slate. Because of the very complex nature and the irregular occurrence of the soils in these areas, they are mapped as undifferentiated units.

Chewacla soils make up about 45 percent of the acreage, Chenneby soils about 40 percent, and less extensive soils the remaining 15 percent. The pattern and extent of the dominant soils are variable. Each of the dominant soils occurs in about 75 percent of the areas mapped.

This Chewacla soil is medium in natural fertility and organic-matter content. Infiltration rate is medium, and permeability is moderate. The available water capacity is moderate or high.

This Chenneby soil is medium in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is high.

Also in this mapping unit are small areas of Dowellton, Lee, Melvin, Sylacauga, and Toccoa soils. The occurrence of these soils in the delineations is extremely variable. Not all occur in each of the areas mapped.

The Chewacla and Chenneby soils are fairly well suited to most crops grown in the county. Very frequent flooding of very brief duration, a seasonal high water table at 6 to 18 inches, and the somewhat poor drainage limit their suitability for some crops. Draining most of these areas is difficult because floods clog or destroy ditch outlets, and in many areas, normal stream levels are higher than the areas to be drained. Erosion is not a hazard on these soils, except where floods cause scouring. Capability unit IIIw–15; woodland group 1w8.

Choccolocco Series

The Choccolocco series consists of deep, well-drained, nearly level soils on low stream terraces. The soils formed in alluvium and valley fill material derived from slate, limestone, and shale.

In a representative profile the surface layer is brown silt loam 6 inches thick. The subsoil is very friable, yellowish-brown silty clay loam in the upper 18 inches and brownish-yellow silt loam mottled with yellowish brown and light yellowish brown in the lower 18 inches. The underlying material is 18 inches of mixed yellowish-brown and brown sandy loam overlying 12 inches of stratified beds of quartz gravel and sandstone gravel.

Nearly all the acreage has been cleared and is used for crops or pasture. The native vegetation is mixed hardwoods and pine.

Representative profile of Choccolocco silt loam, 0 to 2 percent slopes, in a pasture 2¼ miles southwest from Talladega-Calhoun county line on Alabama Highway No. 21, 3¼ miles east on farm-to-market road, and 50 feet south of road, NW¼SW¼ sec. 8, T. 17 S., R. 8 E.:

Ap—0 to 6 inches, brown (10YR 5/3) silt loam; weak, fine, granular structure; very friable; many fine grass roots; slightly acid; abrupt, smooth boundary.

B21t—6 to 24 inches, yellowish-brown (10YR 5/6) silty clay loam; moderate, fine and medium, subangular blocky structure; very friable; few fine roots; many, very thin, patchy clay films on all peds; few small quartz pebbles; medium acid; gradual, wavy boundary.

B22t—24 to 42 inches, brownish-yellow (10YR 6/6) silt loam; common, fine, yellowish-brown mottles and few, fine, light yellowish-brown mottles; weak to moderate, medium, subangular blocky structure; friable; few fine roots; common, very thin, patchy clay films; few quartz pebbles; isolated pockets of sandy material; strongly acid; clear, irregular boundary.

C1—42 to 60 inches, mixed yellowish-brown (10YR 5/6) and brown (10YR 4/3) sandy loam; massive; stratified; friable; strata of sandy material and loamy material in pockets of silty material; strongly acid; clear, irregular boundary.

C2—60 to 72 inches, stratified beds of quartz gravel and sandstone gravel; strongly acid.

The solum ranges from 40 to more than 60 inches in thickness. Depth to hard rock is 5 to 8 feet. Reaction is slightly acid in the A horizon and medium acid to strongly acid in the B horizon. Mica flakes range from none to common in the profile. The Ap horizon is brown or dark brown and is 5 to 12 inches thick. The B21t horizon ranges from light olive brown to strong brown. It is dominantly silty clay loam but in places is loam or silt loam and is less than 15 percent sand coarser than very fine sand. The B2t horizon ranges from pale brown to light olive brown and in places has mottles in shades of yellow and brown. In places it does not have a matrix color and is mottled with shades of brown, yellow, and olive. The C horizon is extremely variable, ranging

from sandy to clayey material and generally stratified. Colors vary but generally are mottled with shades of yellow, gray, and brown.

Choccolocco soils are associated with Chenneby, Chewacla, Dowellton, McQueen, Sylacauga, Toccoa, and Wickham soils. They are better drained than Dowellton and Sylacauga soils. They are not so red in the subsoil as McQueen and Wickham soils. They have stronger profile development than Chenneby, Chewacla, and Toccoa soils and are less frequently flooded.

Choccolocco silt loam (Ch).—This is the only Choccolocco soil mapped in the county. It has the profile described as representative of the series. It is susceptible to flooding for very brief periods.

Included with this soil in mapping are small areas of McQueen, Sylacauga, Toccoa, and Wickham soils and small areas of soils that have a few gray mottles in the upper 24 inches of the subsoil.

This Choccolocco soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium to high.

This soil is well suited to all crops grown in the county. It is easy to work and can be tilled within a medium range of moisture content. It is subject to frequent, very brief periods of flooding, but crops are seldom damaged. There is no erosion hazard except where floods cause scouring. Capability unit I–1; woodland group 3o7.

Clymer Series

The Clymer series consists of moderately deep, well-drained, medium-textured, steep soils on hillsides. The elevation is 1,400 to 1,900 feet above sea level. These soils formed in material weathered from sandstone or quartzite. Slopes range from 20 to 50 percent. Lower slopes are underlain by slate.

In a representative profile the surface layer is very dark gray stony loam 4 inches thick. The subsurface layer is 2 inches of yellowish-brown stony fine sandy loam. The upper part of the subsoil is 15 inches of yellowish-brown, friable sandy clay loam. The lower part is 6 inches of light yellowish-brown, friable stony sandy loam. The underlying material is 9 inches of mottled light-gray, pale-yellow, and brownish-yellow stony coarse sandy loam. Hard sandstone is at a depth of 36 inches.

The acreage is small. It is entirely wooded with a mixed stand of southern hardwoods and longleaf, loblolly, and Virginia pines.

Representative profile of Clymer stony loam, 20 to 50 percent slopes, on a narrow ridgetop 2¾ miles west of junction of Alabama Highway No. 77 and Talladega County Road No. 7 and 300 feet north of road, SW¼ NW¼ sec. 6, T. 20 S., R. 6 E.:

A1—0 to 4 inches, very dark gray (10YR 3/1) stony loam; weak, fine, granular structure; very friable, many fine roots; 25 percent sandstone fragments on surface and size ranges from 1 to 20 feet in diameter; very strongly acid; clear, smooth boundary.

A2—4 to 6 inches, yellowish-brown (10YR 5/4) fine sandy loam; weak, fine, granular structure; very friable; many fine and medium roots; 15 percent quartz and sandstone fragments; very strongly acid; clear, wavy boundary.

B2t—6 to 21 inches, yellowish-brown (10YR 5/6) sandy clay loam; weak, fine and medium, subangular blocky structure; friable; common fine roots; 10 percent quartz and sandstone fragments; few, very thin, patchy clay films on ped surfaces; very strongly acid; gradual, wavy boundary.

B3t—21 to 27 inches, light yellowish-brown (10YR 6/4) sandy loam; weak, fine and medium, subangular blocky structure; friable; few fine roots; 20 percent quartz and sandstone fragments; few, very thin, patchy clay films on ped surfaces, sand grains coated and bridged with clay; very strongly acid; gradual, wavy boundary.

C—27 to 36 inches, mottled light-gray (5Y 7/2), pale-yellow (5Y 7/3), and brownish-yellow (10YR 6/6) coarse sandy loam; rock structure; very friable; compact in place; 20 percent sandstone fragments; very strongly acid; clear, wavy boundary.

R—36 inches +, hard sandstone.

Depth to bedrock ranges from 24 to 42 inches. Reaction is very strongly acid throughout the profile. Sandstone fragments on the surface range from 1 to 20 inches in size and cover 20 to 85 percent of the surface. Stones range in size from 1 to 25 feet. Fragments make up 10 to 35 percent of the profile. The A1 horizon ranges from very dark gray to brown and is 1 to 5 inches thick. The A2 horizon ranges from yellowish brown to light olive brown and is 2 to 10 inches thick. The B2t horizon ranges from strong brown to light olive brown and from loam to sandy clay loam. The B3 horizon ranges from light yellowish brown to light olive brown and is sandy loam or loam. The B3 horizon is absent in some profiles. The C horizon, when present, is mottled with shades of gray, yellow, and brown, and is sandy loam or loamy sand. The C horizon is compact in places and has weak rock structure. Bedrock is sandstone or quartzite.

Clymer soils are associated with Allen, Holston, Tallapoosa, and Tatum soils. They are not so deep over bedrock as Allen and Holston soils. They are not so fine textured in the subsoil as Tatum soils, and they are deeper over bedrock than the Tallapoosa soils.

Clymer stony loam (Cm).—This is the only Clymer soil mapped in the county. It has the profile described as representative of the series. Slopes range from 20 to 50 percent.

Included with this soil in mapping are some areas where the depth to bedrock is less than 20 inches and others where it is more than 42 inches. Also included are small areas where the subsoil is yellowish red, areas where the subsoil is silty clay, and areas of bluffs or escarpments where the surface is entirely covered with sandstone or quartzite rock. The size of these areas ranges from one-fourth acre to 4 acres.

This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

Steep slopes, a very high erosion hazard, and a large number of stones on the surface make this soil unsuited to cultivated crops. Capability unit VIIe–21; woodland group 4x3.

Decatur Series

The Decatur series consists of deep, well-drained soils. These soils formed in material weathered from limestone.

In a representative profile the surface layer is dark reddish-brown silt loam 6 inches thick. The subsoil is firm to friable and sticky, dark-red clay. It extends to a depth of more than 72 inches.

Most of the acreage has been cleared and is used mainly for crops or pasture. About one-fourth of the acreage is idle or has been reforested with pine trees.

Representative profile of Decatur silt loam, 2 to 6 percent slopes, in an idle field 1.5 miles west of junction of Alabama Highway No. 21 and County Road No. 42

and 0.6 mile south of County Road No. 42, under a power line, NE¼NE¼ sec. 32, T. 18 S., R. 5 E.:

Ap—0 to 6 inches, dark reddish-brown (5YR 3/4) silt loam; moderate, medium, granular structure; friable; many fine and medium roots; few black and dark-brown concretions; few rounded, iron coated, highly weathered quartz pebbles; medium acid; abrupt, smooth boundary.

B21t—6 to 20 inches, dark-red (2.5YR 3/6) clay; weak to moderate, medium, subangular blocky structure; friable, sticky; many fine and medium roots; common, thin, patchy clay films; few peds coated with manganese and iron; few dark concretions; strongly acid; gradual, smooth boundary.

B22t—20 to 42 inches, dark-red (10R 3/6) clay; moderate, fine, subangular and angular blocky structure; friable, sticky; thin continuous clay films; few dark concretions; strongly acid; gradual, smooth boundary.

B23t—42 to 66 inches, dark-red (10R 3/6) clay; moderate, medium, subangular and angular blocky structure; friable to firm, sticky; many, thin, patchy clay films; few dark-brown concretions; strongly acid; gradual, smooth boundary.

B24t—66 to 75 inches, dark-red (10R 3/6) clay; moderate, medium, subangular and angular blocky structure; friable to firm, sticky; few dark concretions; strongly acid.

Thickness of the solum and depth to bedrock range from 72 to 90 or more inches. Dark-brown and black concretions range from few to many in all horizons. Reaction is medium acid in the A horizon and strongly acid in the B horizon. The A horizon is dark reddish brown to dark red and 3 to 10 inches thick. It ranges from loam to silt loam in the uneroded areas and to silty clay loam in the eroded and severely eroded areas. The B21t, B22t, and B23t horizons are dark red and range from clay loam to clay. The B24t ranges from red to dark red and in places has a few yellowish-brown and brownish-yellow mottles. In places few to common, angular, chert fragments, ranging from ¼ inch to 2 inches in size, are present in the lower part of the B horizon.

Decatur soils are associated with Anniston, Dewey, Fullerton, Grasmere, Leadvale, and Minvale soils. They are redder than Dewey and Fullerton soils. They are finer textured than Anniston soils. They do not have the chert content that is typical of Minvale soils. They do not have a fragipan as do Leadvale soils. They do not have a buried A horizon as do Grasmere soils.

Decatur loam, 0 to 2 percent slopes (DcA).—This soil has a surface layer of dark reddish-brown loam 6 to 10 inches thick. The subsurface layer is dark-red clay loam about 6 inches thick. The subsoil is dark-red clay more than 50 inches thick.

Included with this soil in mapping are small areas of Dewey and Grasmere soils and some areas where the surface layer is silt loam or fine sandy loam.

This Decatur soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium.

This soil is well suited to all the commonly grown crops in the county and is responsive to good management. It is fairly easy to work and can be tilled within a medium range of moisture content without clodding or crusting. Erosion is not a hazard. Capability unit I–2; woodland group 3o7.

Decatur silt loam, 2 to 6 percent slopes (DdB).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas of Anniston, Dewey, Fullerton, and Grasmere soils and small areas where the surface layer is silty clay loam or fine sandy loam.

This Decatur soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is well suited to all crops and pasture plants that are grown in this county. It is fairly easy to work and can be tilled within a medium moisture range. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–4; woodland group 3o7.

Decatur silty clay loam, 4 to 10 percent slopes, eroded (DeC2).—This soil has a plow layer of dark reddish-brown silty clay loam 4 inches thick. The upper part of the subsoil, about 50 inches thick, is dark-red clay. The lower part, 20 inches thick, is red clay that has a few brownish-yellow mottles.

Included with this soil in mapping are small areas of Anniston, Dewey, and Fullerton soils and areas where the surface texture is silty clay. Also included are many cultivated fields that have a few shallow gullies (fig. 7), and pasture areas and areas reforested with pine trees where there are numerous old gully scars and terrace remnants.

This Decatur soil is low in natural fertility and organic-matter content. Infiltration is medium to slow, and permeability is moderate. Available water capacity is medium.

This soil is suited to most of the crops grown locally. It is well suited to pasture and woodland. Tillage is restricted to only a narrow range of moisture content. Clods and crusts form if the soil is tilled when it is too wet or too dry. The soil is difficult to work and prepare a suitable seedbed. The risk of a poor stand is high. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–13; woodland group 4c2.

Decatur silty clay loam, 10 to 25 percent slopes, severely eroded (DeE3).—This soil has a plow layer of dark reddish-brown silty clay loam 3 inches thick. The subsoil is dark-red clay more than 5 feet thick.

Included with this soil in mapping are small areas of Anniston, Dewey and Fullerton soils and a few areas where the surface layer is silty clay. Also included are shallow and deep gullies and a few old terrace remnants.

This Decatur soil is low in natural fertility and organic-matter content. Infiltration is medium to slow, and permeability is moderate. The available water capacity is medium.

Steep slopes and a very high erosion hazard make this soil very poorly suited to cultivated crops. It is suited to pasture and woodland. It is difficult to work and prepare a seedbed, and tillage is restricted to a narrow range of moisture content. Most areas need smoothing before planting to pasture. Capability unit VIIe–22; woodland group 4c2.

Dewey Series

The Dewey series consists of deep, well-drained, red soils on uplands. These soils formed in residuum weathered from limestone.

In a representative profile the surface layer is reddish-brown clay loam 3 inches thick. The subsoil is yellowish-red, friable clay loam in the uppermost 23 inches; the next 24 inches is mottled red, yellowish-red, and light yellowish-brown, friable clay loam or clay; the next 15

Figure 7.—**Shallow gully in Decatur silty clay loam, 4 to 10 percent slopes, eroded. Unless the soil is well managed, gullies form where slopes are row cropped.**

inches is yellowish-red, firm clay mottled with strong brown; and the lowermost 15 inches is mottled strong-brown and yellowish-red, friable clay loam.

About 85 percent of the acreage has been cleared and is used mainly for crops and pasture. About one-fourth of the acreage is idle or has been reforested with pine trees. The native vegetation is mixed southern hardwoods and pine.

Representative profile of Dewey clay loam, 2 to 6 percent slopes, eroded, in an idle field about 2 miles southwest of Blue Eye Church, NW¼SE¼ sec. 36, T. 16 S., R. 4 E.:

Ap—0 to 3 inches, reddish-brown (5YR 4/4) clay loam; weak, fine, granular structure; very friable; many fine roots; medium acid; gradual, wavy boundary.

B1t—3 to 7 inches, yellowish-red (5YR 4/8) clay loam; weak, medium, subangular blocky structure; friable; many fine roots; patchy clay films; few, small, black concretions; strongly acid; gradual, wavy boundary.

B21t—7 to 26 inches, yellowish-red (5YR 4/6) clay loam; moderate, medium, subangular and angular blocky structure; friable; few fine roots; many, thin, patchy clay films; few, small, black concretions; very strongly acid; gradual, wavy boundary.

B22t—26 to 50 inches, mottled red (2.5YR 4/6), yellowish-red (5YR 5/6), and light yellowish-brown (10YR 6/4) clay loam or clay; strong, medium, subangular and angular blocky structure; friable; many thin clay films on most peds; strongly acid; gradual, wavy boundary.

B23t—50 to 65 inches, yellowish-red (5YR 4/6) clay; few, fine, faint, strong-brown mottles; moderate, medium, subangular blocky structure; firm; many, thin, patchy films; strongly acid; gradual, wavy boundary.

B3t—65 to 80 inches, mottled strong-brown (7.5YR 5/6) and yellowish-red (5YR 4/6) clay loam; moderate, medium, subangular blocky structure; friable; common, thin, patchy clay films; strongly acid.

Thickness of the solum and depth to bedrock range from 72 inches to more than 90 inches. Reaction is medium acid in the A horizon, strongly acid in the B1t horizon, very

strongly acid in the B21t horizon, and strongly acid in the lower part of the B horizon. The Ap horizon ranges from dark reddish brown to brown and is 3 to 10 inches thick. The B21t horizon is yellowish-red to dark-red clay loam or clay. The B22t, B23t, and B3t horizons range from yellowish red to dark red and are mottled with shades of brown and yellow or with shades of brown, red, and yellow. The texture of these horizons is clay loam or clay, but generally it is clay.

Dewey soils are associated with Allen, Cane, Decatur, and Fullerton soils. They are finer textured in the subsoil than Allen and Cane soils. They are not so fine textured and so red as Decatur soils. They do not have a fragipan as do Cane soils. They do not have the chert content that is typical of Fullerton soils.

Dewey loam, 2 to 6 percent slopes (DlB).—This soil has a plow layer of reddish-brown loam 4 inches thick. The upper part of the subsoil, 18 inches thick, is yellowish-red to red clay loam. The lower part, more than 2 feet thick, is red clay loam to clay mottled with pale brown, brownish yellow, and dark red. Depth to bedrock is more than 6 feet.

Included with this soil in mapping are small areas of Decatur and Fullerton soils, and a few small areas where the surface layer is sandy loam and the upper part of the subsoil is clay loam.

This Dewey soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is well suited to all crops grown in the county. It can be tilled within a medium range of moisture content. Clods form if the soil is tilled when it is too wet. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–4; woodland group 3o7.

Dewey clay loam, 2 to 6 percent slopes, eroded (DmB2).—This soil has the profile described as representative of the series (fig. 8).

Included with this soil in mapping are small areas of Decatur and Fullerton soils, small areas of soils that have a loam or silty clay loam surface layer, and the rills and a few shallow gullies common in most cultivated fields.

This Dewey soil is low in natural fertility and organic-matter content. Infiltration is medium to slow, and permeability is moderate. The available water capacity is medium.

This soil is suited to most crops grown in the county. It is fairly easy to work but tillage is restricted to a narrow range of moisture content. Clods form if the soil is tilled too wet, resulting in poor crop stands. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–13; woodland group 4c2.

Dewey clay loam, 6 to 10 percent slopes, eroded (DmC2).—This soil has a plow layer of reddish-brown clay loam 4 inches thick. The upper part of the subsoil, about 27 inches thick, is dark-red clay. The lower part, 4 inches thick, is dark red mottled with pale brown.

Included with this soil in mapping are small areas of Decatur and Fullerton soils; a few areas that have a cherty surface layer; and, in the vicinity of Lincoln, areas that make up about one-half the acreage, where the soil has a loam or sandy loam surface layer. Also included are a few shallow gullies that have formed in most cultivated fields.

This Dewey soil is low in natural fertility and organic-matter content. Water enters the soil slowly and moves through the profile at a moderate rate. The available water capacity is medium.

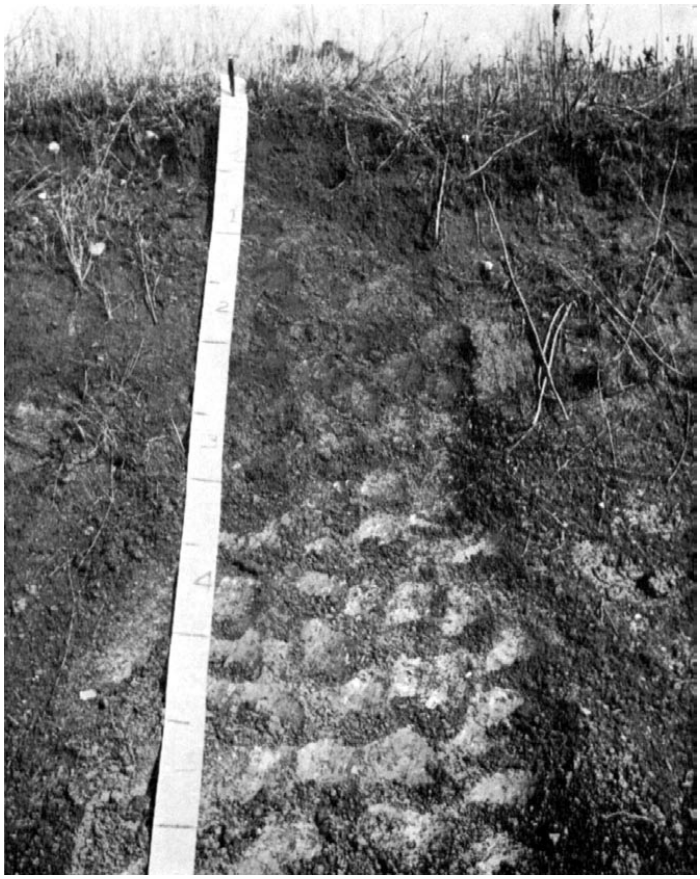


Figure 8.—**Profile of Dewey clay loam, 2 to 6 percent slopes, eroded.**

This soil is suited to most crops grown in the county. It is well suited to pasture and woodland. Crusting makes it difficult to work and prepare a suitable seedbed. The soil can be tilled within only a narrow range of moisture content. Clods form if it is tilled when too wet. The erosion hazard is high in tilled areas. Capability unit IVe–16; woodland group 4c2.

Dewey clay loam, 10 to 25 percent slopes, severely eroded (DmE3).—This soil has a surface layer of dark-brown clay loam 3 inches thick. The upper part of the subsoil, about 30 inches thick, is dark-red clay. The lower part, more than 24 inches thick, is red clay that has many yellowish-brown and light yellowish-brown mottles.

Included with this soil in mapping are small areas of Decatur and Fullerton soils and a few areas where the surface layer is silty clay and clay. Also included are the gully scars, shallow and deep gullies, and old terrace remnants common in these areas. Many gullies cannot be crossed with mechanized farm machinery. Some gullies are 8 to 10 feet deep and are 100 to 300 feet apart.

This Dewey soil is low in natural fertility and organic-matter content. Infiltration is medium to slow, and permeability is moderate. The available water capacity is medium.

Steep slopes, gullying, and the very high erosion hazard make this soil very poorly suited to cultivated crops. The soil is suited to pasture and to woodland. It is difficult to work and prepare a seedbed. The moisture range suitable for tillage is narrow. Most areas need to be smoothed before planting to pasture. Capability unit VIIe–22; woodland group 4c2.

Dowellton Series

The Dowellton series consists of deep, poorly drained, level and nearly level soils. These soils formed in alluvium or residuum derived from limestone and cherty limestone. They are on broad stream terraces and in large depressions in the uplands.

In a representative profile the surface layer is grayish-brown silt loam 8 inches thick. The uppermost layer of the subsoil is 4 inches of gray silty clay loam mottled with light olive brown. The next 7 inches is firm, gray silty clay loam. The next layer is 25 inches of firm, gray clay mottled with olive yellow. The next 14 inches is mottled gray and yellowish-brown clay that is firm, very sticky, and very plastic. The lowermost layer is very firm, plastic, and sticky mottled gray and yellowish-brown gravelly clay 10 inches thick.

About one-fourth the acreage has been cleared and is used for pasture or is idle. A few areas have been reforested with pine trees. The native vegetation is mixed lowland hardwoods and a few scattered pine.

Representative profile of Dowellton silt loam, 0 to 2 percent slopes, in a pasture 6¼ miles northeast of Talladega on Alabama Highway No. 21, and 3¼ miles north on a paved county road, and 1,000 feet west of road, NE¼SE¼ sec. 21, T. 17 S., R. 6 E.:

Ap—0 to 8 inches, grayish-brown (10YR 5/2) silt loam; weak, fine, granular structure and weak, fine, subangular blocky structure; friable; many fine roots; neutral; clear, smooth boundary.

B1g—8 to 12 inches, gray (N 5/0) silty clay loam; common, medium, distinct, light olive-brown mottles; weak, coarse, subangular blocky structure; friable; common fine roots; 8 percent small black concretions and pebbles; neutral; clear, smooth boundary.

B21tg—12 to 19 inches, gray (N 5/0) silty clay loam; weak, medium and fine, subangular blocky structure; firm; few fine roots; few patchy clay films; 10 to 15 percent small black concretions and pebbles; neutral; gradual, wavy boundary.

B22tg—19 to 44 inches, gray (5Y 6/1) clay; many, medium, distinct, olive-yellow mottles; moderate, medium, subangular blocky structure; firm; patchy clay films; few fine roots; few cracks, one-half inch wide, extend downward; 25 percent small black concretions and pebbles; neutral; gradual, wavy boundary.

B23t—44 to 58 inches, mottled gray (5Y 6/1) and yellowish-brown (10YR 5/8) clay; moderate, medium, subangular blocky structure; very firm, very sticky, very plastic; clay films on pebble surfaces and few ped faces; 10 percent black concretions; limestone, chert, and quartz pebbles; concretions increase with depth; few to common cracks 1 inch wide; neutral; gradual, wavy boundary.

B24t—58 to 68 inches, mottled gray (5Y 6/1) and yellowish-brown gravelly clay; moderate, medium, subangular blocky structure; very firm, plastic, sticky; clay films on most ped faces and pebbles; 30 percent black concretions; 20 percent limestone and chert fragments as much as 2 inches in diameter; neutral.

The solum is more than 60 inches thick. Depth to bedrock ranges from 62 to 117 inches or more, but this depth does not materially affect management or behavior of the soil. Small black concretions range from few to many. Reaction is neutral throughout the profile. The Ap horizon ranges from dark gray to light brownish gray and is 6 to 12 inches thick. The Bt horizon ranges from dark gray to light gray and generally is mottled with shades of yellow, red, brown, and olive. The texture is silty clay or clay. Cracks, one-eighth to 1 inch wide, form in the subsoil during dry periods.

Dowellton soils are associated with Beason, Decatur, Dewey, Fullerton, Guthrie, Leadvale, Lee, Minvale, and Wickham soils. They are more poorly drained than Beason, Leadvale, Minvale, and Wickham soils and, except for Beason soils are more clayey in the subsoil. They do not have a fragipan as do Guthrie soils. They are more clayey than Lee soils. They are much more poorly drained than Decatur, Dewey, and Fullerton soils.

Dowellton silt loam (Do).—This is the only Dowellton soil mapped in the county. It has the profile described as representative of the series. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Beason, Guthrie, and Lee soils and some areas where the surface layer is loam or silty clay loam.

This Dowellton soil is medium in natural fertility and in organic-matter content. Water enters the soil at a medium to slow rate and moves through the profile at a slow rate. The available water capacity is medium. The seasonal high water table is at the surface or within a depth of 12 inches for long periods of time.

The poor drainage and brief periods of standing water make this soil poorly suited to cultivated crops, but it is suited to pasture and woodland. Some row crops can be grown if this soil is artificially drained. Erosion is not a hazard. Capability unit IVw–17; woodland group 3w9.

Enders Series

The Enders series consists of deep, well-drained soils on uplands. These soils formed in residuum that weathered from shale or interbedded shale and sandstone.

In a representative profile the surface layer is very dark grayish-brown shaly loam 3 inches thick and the subsurface layer is brown loam 2 inches thick. The subsoil is firm, yellowish-red clay in the uppermost 15 inches. The next 22 inches is firm, mottled red, strong-brown, pale-brown, and yellowish-brown clay. The lowermost 6 inches is mottled pale-olive and yellowish-red clay or silty clay. Olive-colored shale is at a depth of 48 inches.

About 85 percent of the acreage is woodland. The cleared areas are used mainly for pasture, but some are idle. The native vegetation is mixed hardwoods and pine.

Representative profile of Enders shaly loam, 15 to 45 percent slopes, one-fourth mile northeast of an old dam at Jackson Shoals, NW¼SE¼ sec. 15, T. 17 S., R. 5 E.:

A1—0 to 3 inches, very dark grayish-brown (10YR 3/2) shaly loam; weak, fine, granular structure; friable; 15 percent sandstone and shale fragments; strongly acid; clear, smooth boundary.

A2—3 to 5 inches, brown (10YR 4/3) shaly loam; weak, fine, granular structure; friable; 15 percent sandstone and shale fragments; strongly acid; clear, smooth boundary.

B21t—5 to 20 inches, yellowish-red (5YR 5/8) clay; strong, fine, angular blocky structure; firm; 5 percent shale fragments; many, thin, patchy clay films on most ped surfaces; very strongly acid; gradual, wavy boundary.

B22t—20 to 42 inches, mottled red (2.5YR 5/8), strong-brown (7.5YR 5/6), pale-brown (10YR 6/3), and yellowish-brown (10YR 5/8) clay; moderate, medium, subangular and angular blocky structure; firm; 10 percent shale fragments; common, thin, patchy clay films on most ped surfaces; very strongly acid; gradual, irregular boundary.

B3—42 to 48 inches, mottled pale-olive (5Y 6/3) and yellowish-red (5YR 4/6) clay or silty clay; weak, medium, subangular blocky structure; firm; few fine roots; few, very thin, patchy clay films; pockets of partly weathered shale; very strongly acid; clear, wavy boundary.

R—48 inches +, tilted, olive-colored shale.

Thickness of the solum and depth to bedrock range from 42 to 60 inches. Reaction is strongly acid in the A horizon and very strongly acid in the B horizon. The A1 horizon ranges from very dark gray to dark grayish brown and is 1 inch to 4 inches thick. The A2 or Ap horizon ranges from strong brown to pale brown. The B1 horizon, where present, ranges from strong brown to yellowish red and is silty clay loam or silty clay texture. The B21 horizon ranges from yellowish-red to red silty clay or clay. The B22 horizon is generally mottled with shades of red, brown, and olive, or in places it is yellowish-red to dark-red matrix color mottled with shades of brown and olive. The B22 horizon is silty clay or clay. The B3 horizon is silty clay or clay mottled with shades of olive, red, and brown.

Enders soils are associated with Dewey, Lee, Lobelville, Locust, Montevallo, and Townley soils. They are deeper over bedrock than Montevallo and Townley soils. They have a thinner solum than Dewey soils. They are better drained than Lee, Lobelville, and Locust soils. They do not have a fragipan as do Locust soils.

In this county Enders soils are mapped only in association with Montevallo and Townley soils.

Enders-Montevallo association, steep (EmE).—The soils in this association are in the northwestern part of the county. They are on very narrow ridgetops and short slopes that are underlain by shale or shale interbedded with sandstone. Slopes range from 15 to 45 percent. Rock outcrops are common on the hillsides. In most places the crests of the hills and narrow ridges are extremely rocky. Sandstone rocks 6 to 30 inches in diameter cover 50 to 75 percent of the surface. Most of the acreage is wooded. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

The association is about 45 percent Enders soils, 28 percent Montevallo soils, and 27 percent soils of minor extent. The percentage of Enders and Montevallo soils varies with each delineation. It ranges from 30 to 60 percent for Enders soils and from 20 to 40 percent for Montevallo soils.

The Enders soil is mainly on the middle and lower slopes. It has a surface layer of very dark gray and dark grayish-brown shaly loam about 7 inches thick. The subsoil, about 25 inches thick, is yellowish-red clay mottled in the lower part with pale brown and brownish yellow. The underlying material is yellowish-red clay mottled with brownish yellow. It has platy rock structure. Tilted shale is at a depth of 45 inches. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

The Montevallo soil is mainly on the upper slopes and narrow ridgetops. It has a surface layer of dark reddish-brown shaly silt loam 4 inches thick and a subsoil of dark reddish-gray light silty clay loam about 6 inches thick. Bedrock, at a depth of 10 inches, is partly weathered, weak red shale that is easy to break with hand tools. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is low.

Less extensive in this association are the Hector, Holston, and Townley soils and soils that have a subsoil of yellowish-red sandy clay loam and are 20 to 40 inches deep over bedrock. These shallower soils make up 3 percent of the association. Hector soils make up 10 percent of the association and are mainly on narrow ridgetops and upper hillsides. Holston soils make up 5 percent of the association and are on benches and lower slopes, and Townley soils make up 9 percent of the association and are mainly on middle slopes.

The steep slopes and very high erosion hazard make these soils very poorly suited to cultivated crops and pasture. The soils are well suited to woodland. Capability unit VIIe–21; woodland group 4r3.

Enders-Townley-Montevallo complex, 6 to 15 percent slopes (EtD).—The soils in this complex are on narrow ridgetops and on hillsides in the central and northern parts of the county. The soils are so intricately mixed on the landscape and are in such small, irregular shapes that it is impractical to show them separately on the soil map.

This complex is about 34 percent Enders soils, 23 percent Montevallo soils, 29 percent Townley soils, and 14 percent soils of minor extent. Each of the areas mapped contains the three dominant soils, but the percentage of each soil varies. The percentage of Enders soils ranges from about 20 to 50 percent; Montevallo, 10 to 50 percent; and Townley, 10 to 60 percent.

The Enders soil has a surface layer of brown gravelly loam 4 inches thick and a subsurface layer of strong-brown silty clay loam about 4 inches thick. The upper part of the subsoil, about 16 inches thick, is yellowish-red silty clay. The lower part of the subsoil, about 24 inches thick, is yellowish-red clay mottled with yellowish brown and red. Tilted, highly fractured shale is at a depth of 48 inches. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

The Townley soil has a surface layer of brown gravelly loam 6 inches thick and a subsoil of yellowish-red silty clay about 18 inches thick. The lower part of the subsoil is slightly mottled with brownish yellow. Tilted, highly fractured shale is at a depth of 24 inches. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is slow. The available water capacity is medium.

The Montevallo soil has a surface layer of dark grayish-brown shaly loam 2 inches thick and a subsurface layer of olive-brown shaly loam 6 inches thick. The subsoil, about 8 inches thick, is strong-brown light silty clay loam that is 45 percent soft shale fragments. The subsoil is underlain by partly weathered, tilted, weak-red shale that can be broken with hand tools. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is low.

Less extensive in this complex are the Allen, Dewey, Hector, Holston, Locust, Rock land, and Tallapoosa soils.

Not all the soils occur in all of the areas mapped. The percentage in each delineation ranges from 0 to 30 percent.

About two-thirds of the acreage has been cleared, but very little of it is used for crops or pasture. Many areas are in pine trees or are idle. Some contain a few shallow gullies. The native vegetation is mixed hardwoods and pine.

The slope, shallowness over rock, and very high erosion hazard make these soils poorly suited to row crops. The soils are suited to pasture. Pine trees grow well. Capability unit VIe-20; woodland group 4o1.

Fullerton Series

The Fullerton series consists of deep, well-drained, cherty soils on uplands. These soils formed in residuum from cherty limestone.

In a representative profile the surface layer is dark grayish-brown cherty silt loam 6 inches thick and the subsurface layer is 3 inches of light yellowish-brown loam. The subsoil, more than 60 inches thick, is firm, red clay in the uppermost 11 inches; yellowish-red cherty clay mottled with brownish yellow in the next 27 inches; and mottled yellowish-red and brownish-yellow, firm cherty clay in the lowermost 23 inches.

About two-thirds of the acreage has been cleared and is used mainly for crops or pasture; some of it is idle. The native vegetation is mixed hardwoods and pine.

Representative profile of Fullerton cherty silt loam, 2 to 6 percent slopes, in an idle field, 1½ miles southeast of confluence of Coldwater and Choccolocco Creeks, NE¼NW¼ sec. 10, T. 17 S., R. 7 E.:

Ap—0 to 6 inches, dark grayish-brown (10YR 4/2) cherty silt loam; weak, fine, granular structure; friable; many fine roots; 25 percent chert fragments ½ inch to 8 inches in diameter; medium acid; abrupt, smooth boundary.

A2—6 to 9 inches, light yellowish-brown (10YR 6/4) loam; massive; friable or firm; few fine roots; compact in place; brittle; 8 percent small chert fragments; strongly acid; gradual, broken boundary.

B21t—9 to 20 inches, red (2.5YR 4/6) clay; strong, coarse, subangular and angular blocky structure; firm; few fine roots; thin continuous clay films on ped surfaces; 5 percent small chert fragments; very strongly acid; gradual, wavy boundary.

B22t—20 to 47 inches, yellowish-red (5YR 5/6) cherty clay, common, medium, distinct, brownish-yellow mottles; strong, medium, subangular and angular blocky structure; firm; few fine roots; thin continuous clay films on ped surfaces; 20 percent chert fragments; very strongly acid; gradual, wavy boundary.

B23t—47 to 70 inches, mottled yellowish-red (5YR 5/6) and brownish-yellow (10YR 6/6) cherty clay; moderate, medium and coarse, subangular blocky structure; firm; common, thin, patchy clay films on ped surfaces; 30 to 40 percent partly weathered chert fragments ¼ to 2 inches in diameter and occasionally as much as 6 inches in diameter; very strongly acid.

Thickness of the solum and depth to bedrock range from 6 feet to more than 8 feet. Reaction ranges from medium to strongly acid in the A horizon and is very strongly acid in the B horizon. Chert content ranges from 15 to 35 percent throughout the solum. The A1 horizon ranges from dark gray to dark grayish brown and is 2 to 5 inches thick. The A2 or Ap horizon generally ranges from dark brown to light yellowish brown, and where eroded, it ranges from strong brown to yellowish red. The A horizon ranges from cherty silt loam to cherty silty clay loam. The B1 horizon, where present, ranges from strong brown to yellowish red and is silty clay loam or clay loam. The upper part of the B2t horizon ranges from yellowish red to red and from silty clay loam to clay. The lower part of the Bt horizon ranges from yellowish red to dark red and is generally mottled with shades of brown, yellow, and olive. In places it does not have a matrix color and is mottled with shades of yellow, red, brown, and olive.

Fullerton soils are associated with Bodine, Decatur, Dewey, Lobelville, Locust, and Minvale soils. They are finer textured in the subsoil than Bodine and Minvale soils and contain less chert than Bodine soils. They contain more chert than Decatur and Dewey soils and are not so red. They do not have a fragipan as do Locust soils, and they are better drained than Lobelville soils.

Fullerton cherty silt loam, 2 to 6 percent slopes (FcB).—This soil has the profile described as representative of the series.

Included with this soil in mapping are a few small areas of Bodine, Dewey, and Minvale soils and a few areas where the surface layer is cherty loam.

This Fullerton soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is suited to all crops commonly grown in the county. Chert fragments on the surface interfere with tillage in most areas. The soil can be tilled throughout a moderately wide range of moisture content without crusts or clods forming. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe-4; woodland group 3o7.

Fullerton cherty silt loam, 6 to 10 percent slopes (FcC).—This soil has a plow layer of brown cherty silt loam 5 inches thick. The upper part of the subsoil, about 15 inches thick, is red clay. The lower part, more than 40 inches thick, is red clay mottled with brownish yellow.

Included with this soil in mapping are small areas of Bodine, Dewey, and Minvale soils and a few small areas where the surface layer is cherty loam.

This Fullerton soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is suited to most crops grown in the county. The chert fragments on the surface (fig. 9) interfere with tillage in most fields. The soil can be tilled throughout a moderately wide range of soil moisture content. Erosion is a moderate hazard in tilled areas. Capability unit IIIe-11; woodland group 3o7.

Fullerton cherty silty clay loam, 6 to 15 percent slopes, eroded (FlD2).—This soil has a surface layer of yellowish-red cherty silty clay loam 2 inches thick. The upper part of the subsoil, about 18 inches thick, is red silty clay. The lower part, about 50 inches thick, is mottled red, yellowish-red, and brownish-yellow cherty clay.

Included with this soil in mapping are small areas of Bodine, Dewey, and Minvale soils. Also included are rills, shallow gullies, and old terraces remnants throughout most of the areas and a few deep gullies.

This Fullerton soil is low in natural fertility and organic-matter content. Infiltration is slow, and permeability is moderate. The available water capacity is medium.

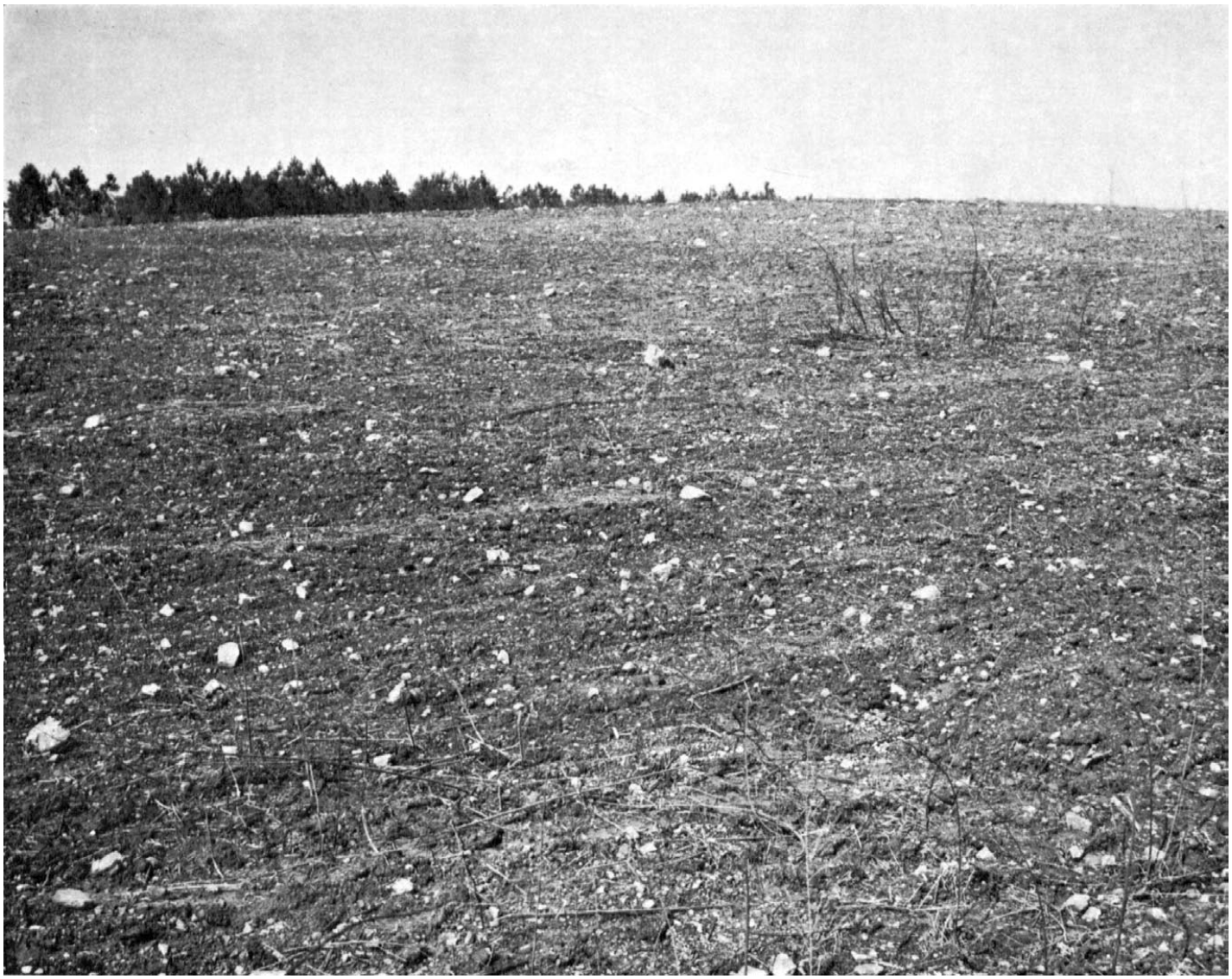


Figure 9.—**Typical area of Fullerton cherty silt loam, 6 to 10 percent slopes.**

The slope and high erosion hazard make this soil poorly suited to cultivated crops. The soil is difficult to work and prepare a seedbed. The moisture range suitable for tillage is narrow. Chert fragments on the surface interfere with tillage in most areas. The soil is suited to pasture, and pine trees grow well. Capability unit IVe–16; woodland group 3o7.

Grasmere Series

The Grasmere series consists of deep, well-drained, dark-red soils. These soils formed in local alluvium mainly from limestone and cherty limestone soils. They are along the smaller streams, narrow drainageways, and depressional areas and are widely distributed throughout the county.

In a representative profile the surface layer is dark reddish-brown silty clay 19 inches thick. The next 12 inches was the surface layer of a buried soil. It is dark reddish-brown, friable, sticky silty clay loam. The subsoil is 35 inches thick. It also was part of a buried soil. It is firm, sticky, plastic, dark-red silty clay mottled with reddish brown in the uppermost 9 inches. The lowermost 26 inches is dark-red clay.

Nearly all the acreage is cleared and is used mainly for corn, cotton, soybeans, small grain, pasture, and hay. Some small areas are idle or have been reforested with pine. The native vegetation is mixed hardwoods and pine.

Representative profile of Grasmere silty clay, 0 to 2 percent slopes, in a cultivated field 2½ miles south of Talladega on Alabama Highway No. 21, one-half mile west on a gravel road, and 200 feet south of road, NW¼NW¼ sec. 8, T. 19 S., R. 5 E.:

Ap—0 to 8 inches, dark reddish-brown (2.5YR 3/4) silty clay; moderate, fine, granular structure and weak, medium, subangular blocky structure; friable, sticky; few fine roots; very strongly acid; abrupt, smooth boundary.

A1—8 to 19 inches, dark reddish-brown (2.5YR 3/4) silty clay; weak, medium, subangular blocky structure; friable, sticky; few fine roots; very strongly acid; gradual, smooth boundary.

Ab—19 to 31 inches, dark reddish-brown (5YR 3/3) silty clay loam; weak, fine, granular structure; friable, sticky; few fine roots; very strongly acid; clear, wavy boundary.

B1b—31 to 40 inches, dark-red (2.5YR 3/6) silty clay; common, fine, distinct, dark reddish-brown mottles; moderate, fine and medium, subangular blocky structure; firm, sticky, plastic; 2 percent small black concretions; 1 percent small chert fragments; medium acid; gradual, wavy boundary.

B2tb—40 to 66 inches, dark-red (2.5YR 3/6) clay; moderate, medium, subangular and angular blocky structure; firm, sticky, slightly plastic; 2 percent small chert fragments; 3 percent small black concretions; common, very thin, patchy clay films on ped surfaces; medium acid.

Thickness of the solum and depth to hard rock range from 5 feet to more than 7 feet. Reaction is very strongly acid in the A horizon and is medium acid in the B horizon. The A1 or Ap horizon is dark reddish brown or dark brown. The A1 and Ab horizons range from dark brown to dark reddish brown and from silt loam to silty clay loam. The depth to the Ab horizon ranges from 10 to 20 inches. The Bb horizon is red to dark red and ranges from silty clay loam to clay.

Grasmere soils are associated with Anniston, Chenneby, Chewacla, Decatur, Dewey, and Toccoa soils. They have a buried subsoil and Anniston, Decatur, and Dewey soils do not. They are better drained than Chenneby and Chewacla soils. They are finer textured than Toccoa soils.

Grasmere silty clay (Gr).—This is the only Grasmere soil mapped in the county. It has the profile described as representative of the series. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Chenneby, Chewacla, Decatur, and Toccoa soils; areas where the surface and subsurface layers are brown; and areas about 30 percent of the acreage, where the surface layer is silty clay loam and silt loam.

This Grasmere soil is moderate to high in natural fertility and medium in organic-matter content. Water enters this soil slowly and moves through it at a moderate rate. The available water capacity is high.

This soil is well suited to the commonly grown crops. It is fairly easy to work and can be tilled throughout a medium range of moisture content without crusting or clodding. Flooding occurs on some of the low areas along the larger drains late in winter and in spring, but crops are seldom damaged. Other areas are subject to seepage water that may delay planting for a very short time. This is one of the most productive soils in the county, and erosion is not a hazard. Capability unit I–2; woodland group 1o7.

Guthrie Series

The Guthrie series consists of deep, poorly drained, nearly level soils that have a fragipan in the lower subsoil. These soils formed on terraces, upland flats, and slight depressions in residuum from limestone and alluvial and colluvial material.

In a representative profile the surface layer is olive-gray and light-gray mottled silt loam 10 inches thick. The upper part of the subsoil, 16 inches thick, is firm, gray silty clay loam mottled with olive yellow and yellow. The lower part, 19 inches thick, is compact and brittle, light-gray silt loam or silty clay loam mottled with olive yellow and yellow. The underlying material, 27 inches thick, is friable, light-gray loam mottled with yellow.

Most of the acreage is woodland. A few areas have been cleared and are used for pasture. The native vegetation is dominantly mixed hardwoods, but there are a few scattered pine.

Representative profile of Guthrie silt loam, 0 to 2 percent slopes, in a pasture 6 miles west on Alabama Highway No. 34 from junction at Alabama Highway No. 77, one-fourth mile south on a gravel road, and 40 feet east of road, SW¼NW¼ sec. 35, T. 17 S., R. 4 E.:

A1—0 to 3 inches, olive-gray (5Y 4/2) silt loam; weak, fine, granular structure; very friable; few fine roots; common medium roots; very strongly acid; clear, smooth boundary.

A2g—3 to 10 inches, light-gray (5Y 7/1 to 7/2) silt loam; common, medium, distinct, yellow mottles; weak, medium, subangular blocky structure; friable; few fine and medium roots; 2 percent small chert fragments; very strongly acid; gradual, irregular boundary.

B2tg—10 to 26 inches, gray (5Y 5/1) silty clay loam; common, medium, distinct, olive-yellow and yellow mottles; moderate, medium, subangular blocky structure; friable or firm; few fine roots; common, very thin, patchy clay films on ped surfaces; 1 to 2 percent chert fragments; very strongly acid; gradual, irregular boundary.

Bx—26 to 45 inches, light-gray (5Y 7/2) silt loam or silty clay loam; common, medium, distinct, olive-yellow and yellow mottles; weak platy structure grading to weak, medium, subangular blocky structure; friable or firm; few fine and medium roots; common, thin, patchy clay films on ped surfaces; compact and brittle; 2 percent chert fragments; vesicular; light-gray (5Y 7/1) silty material in polygonal cracks; very strongly acid; gradual, irregular boundary.

Cg—45 to 72 inches, light-gray (5Y 7/1) loam; common, medium, distinct, yellow mottles; massive; friable; 15 percent chert fragments; isolated silt pockets; very strongly acid; abrupt, irregular boundary.

Thickness of the solum and depth to rock range from 5 feet to 7 feet. Reaction is very strongly acid throughout the profile. Small dark-brown and black concretions range from few to many. The A1 horizon ranges from olive brown to dark gray. The Ap or A2 horizon ranges from brown to light gray and is generally mottled with shades of yellow and olive. The B2tg horizon ranges from dark gray to light brownish gray and has common to many mottles in shades of brown and yellow. The Bx horizon has about the same color and texture as the Bt horizon. Depth to the Bx horizon ranges from 20 to 36 inches. The C horizon is mainly gray and has common to many brown and yellow mottles, or in places it is mottled gray and brown. The texture ranges from loam to silty clay.

The Guthrie soils are associated with Beason, Dowellton, Lee, and Sylacauga soils. In contrast with those soils, Guthrie soils have a fragipan. They are not so clayey in the subsoil as Beason and Dowellton soils. They are not so well drained as Sylacauga soils. They contain fewer coarse fragments than Lee soils, and their horizons are more distinct.

Guthrie silt loam (Gu).—This is the only Guthrie soil mapped in the county. It has the profile described as representative of the series. This soil is subject to very frequent ponding for long periods. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Beason, Dowellton, and Sylacauga soils and some areas of soils that do not have a fragipan.

This Guthrie is low in natural fertility. The organic-matter content is medium. Infiltration rate is medium,

and permeability is slow. The available water capacity is high.

Poor drainage and brief periods of standing water make this soil poorly suited to cultivated crops. The soil is suited to some pasture grasses and clover and to woodland. The deep cuts required to reach satisfactory outlets make drainage impractical in most areas. Erosion is not a hazard. Capability unit IVw–17; woodland group 2w9.

Hector Series

The Hector series consists of shallow, well-drained soils on uplands. Depth to rock is less than 20 inches. These soils formed in residuum weathered from sandstone or quartzite.

In a representative profile the surface layer is dark grayish-brown stony fine sandy loam 4 inches thick. The subsurface layer is 5 inches of yellowish-brown gravelly fine sandy loam. The subsoil, 10 inches thick, is friable, light yellowish-brown gravelly fine sandy loam. Hard sandstone interbedded with shale is at a depth of 19 inches.

All the acreage is woodland. The native vegetation is scrub hardwoods and pine.

Representative profile of Hector stony fine sandy loam, 15 to 50 percent slopes, on a steep wooded hillside about 1 mile northeast of Renfroe fire tower, NW¼SW¼ sec. 35, T. 18 S., R. 4 E.:

A1—0 to 4 inches, dark grayish-brown (10YR 4/2) stony fine sandy loam; weak, fine, granular structure; very friable; many fine roots; many sandstone fragments ½ inch to 5 feet in size; strongly acid; clear, wavy boundary.

A2—4 to 9 inches, yellowish-brown (10YR 5/4) gravelly fine sandy loam; weak, fine, granular structure; very friable; many fine roots; common sandstone fragments up to 3 inches in size; strongly acid; clear, wavy boundary.

B—9 to 19 inches, light yellowish-brown (10YR 6/4) gravelly fine sandy loam; weak, medium, subangular blocky structure; friable; few fine roots; common sandstone fragments less than 3 inches in diameter; very strongly acid; clear, irregular boundary.

R—19 inches +, hard sandstone interbedded with shale.

Depth to bedrock is less than 20 inches. Reaction is strongly acid in the A horizon and very strongly acid in the B horizon. The A1 horizon ranges from very dark gray to dark grayish brown and is 2 to 5 inches thick. The A2 or Ap horizon ranges from brown to light yellowish brown. The B horizon ranges from yellowish brown to pale brown and from gravelly sandy loam to gravelly fine sandy loam. The profile is 10 to 35 percent sandstone fragments.

Hector soils are associated with Clymer, Enders, Montevallo, and Townley soils. They have a thinner, coarser textured solum than Clymer, Enders, and Townley soils. They have fewer coarse fragments than Montevallo soils.

In Talladega County Hector soils are mapped only in the Rock land-Hector-Townley association.

Holston Series

The Holston series consists of deep, well-drained soils. These soils formed in alluvium and valley fill material.

In a representative profile the surface layer is brown fine sandy loam 7 inches thick. The subsoil is yellowish-brown, friable loam in the uppermost 13 inches; sandy clay loam that has a few red mottles in the next 8 inches; mottled yellowish-red and yellowish-brown friable sandy clay loam in the next 17 inches; mottled yellowish-red, yellowish-brown, and light-gray firm clay loam in the next 14 inches; and red, firm clay loam mottled with pale brown, light yellowish brown, and brownish yellow in the lowermost 15 inches.

About 85 percent of the acreage has been cleared and is used mainly for crops and pasture. A few of the areas have been reforested with pine. The native vegetation is mixed hardwoods and pine.

Representative profile of Holston fine sandy loam, 2 to 6 percent slopes, in a cultivated field about 7 miles northwest of Lincoln, SW¼NW¼ sec. 35, T. 15 S., R. 4 E.:

Ap—0 to 7 inches, brown (10YR 4/3) fine sandy loam; weak, fine, granular structure; very friable; few fine roots; few small pebbles; slightly acid; abrupt, smooth boundary.

B21t—7 to 20 inches, yellowish-brown (10YR 5/6) loam; weak, medium, subangular blocky structure; friable; few fine roots; few, very thin, patchy clay films on ped surfaces; few, small, black concretions; strongly acid; gradual, wavy boundary.

B22t—20 to 28 inches, yellowish-brown (10YR 5/8) sandy clay loam; few, medium, prominent, red mottles; weak, medium, subangular blocky structure; friable; few medium roots; common, very thin, patchy clay films on ped surfaces; very strongly acid; gradual, wavy boundary.

B23t—28 to 45 inches, mottled yellowish-red (5YR 5/6) and yellowish-brown (10YR 5/6) sandy clay loam; moderate, medium, subangular blocky structure; friable; continuous clay films on most ped surfaces; strongly acid; gradual, wavy boundary.

B31t—45 to 59 inches, mottled yellowish-red (5YR 5/8), yellowish-brown (10YR 5/8), and light-gray (10YR 7/2) clay loam; moderate, medium, subangular blocky structure; firm; common, very thin, patchy clay films on ped surfaces; compact in place; medium acid; gradual, wavy boundary.

B32t—59 to 74 inches, red (2.5 4/8) clay loam; common, medium, distinct mottles of pale brown, light yellowish brown, and brownish yellow; weak, medium and coarse, subangular blocky structure; firm; few, thin, patchy clay films on ped surfaces; medium acid.

Thickness of the solum and depth to bedrock range from 6 feet to more than 8 feet. Reaction is slightly acid in the A horizon, strongly acid in the B21t, B22t, and B23t horizons, and medium acid below the B23t horizon. The A1 horizon ranges from dark gray to dark brown. The Ap or A2 horizon ranges from dark grayish brown to light yellowish brown. The A horizon ranges from fine sandy loam to gravelly fine sandy loam. The B21t horizon ranges from yellowish brown to brownish yellow and from loam to sandy clay loam. The B23t and B3 horizons are generally mottled in shades of red, brown, and gray; or in places they have brown or red matrix and common to many red, gray, and brown mottles. The B23t and B3 horizons range from loam to silty clay.

Holston soils are on uplands and stream terraces in association with Allen, Cane, Lobelville, Locust, and Minvale soils. Their subsoil is not so red as that of the Allen and Minvale soils. They do not have a fragipan as do Cane and Locust soils. They are better drained than Lobelville soils.

Holston fine sandy loam, 2 to 6 percent slopes (HoB).—This soil has the profile described as representative of the series. On about 20 percent of the acreage, slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Allen and Cane soils and a few small areas where the

surface layer is loam, and some areas where 15 to 20 percent of the surface is covered with gravel.

This Holston soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is well suited to all crops commonly grown in the county. It is easy to work and can be tilled throughout a wide range of soil moisture content without crusts or clods forming. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–3; woodland group 3o7.

Holston gravelly fine sandy loam, 6 to 15 percent slopes (HsD).—This soil has a surface layer of brown gravelly fine sandy loam 4 inches thick. The upper part of the subsoil, 10 inches thick, is brownish-yellow friable sandy clay loam. The lower part, 3 feet thick, is brownish-yellow sandy clay loam mottled with yellowish red and strong brown. Depth to bedrock is more than 6 feet.

Included with this soil in mapping are small areas of Allen and Cane soils, a few small areas where the surface layer is loam, and a few areas that have no gravel on the surface.

This Holston soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium.

This soil is suited to most crops grown in the county. It is well suited to pasture and woodland. It can be tilled throughout a wide range of moisture content without clods or crusts forming. In a few areas the gravel on the surface interferes with tillage. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–10; woodland group 3o7.

Leadvale Series

The Leadvale series consists of deep, moderately well drained, nearly level soils that have a fragipan in the lower part of the subsoil. These soils formed in alluvium derived mainly from limestone, but also from sandstone, shale, slate, and cherty limestone. They are on stream terraces and toe slopes.

In a representative profile the surface layer is brown silt loam 8 inches thick. The upper part of the subsoil, about 22 inches thick, is yellowish-brown, friable silty clay loam that has a few light yellowish-brown and red mottles. The lower part, about 20 inches thick, is compact, mottled gray and yellowish-brown clay loam or silty clay loam. The underlying material, about 22 inches thick, is firm, gray clay loam mottled with yellowish brown.

Most of the acreage has been cleared and is used for cotton, corn, soybeans, small grain, pasture, and hay. Small areas are idle or have been reforested with pine. The native vegetation is mixed hardwoods and pine.

Representative profile of Leadvale silt loam, 0 to 2 percent slopes, in a cultivated field 5½ miles north of Talladega, SE¼SE¼ sec. 5, T. 18 S., R. 6 E.:

Ap—0 to 8 inches, brown (10YR 4/3) silt loam; weak, fine, granular structure; very friable; many fine roots; slightly acid; abrupt, smooth boundary.

B21t—8 to 12 inches, yellowish-brown (10YR 5/8) silty clay loam; few, fine, faint, light yellowish-brown mottles; weak to moderate, medium, subangular blocky structure; friable; few fine roots; few, thin, patchy clay films on ped surfaces; few black and brown concretions; slightly acid; gradual, wavy boundary.

B22t—12 to 26 inches, yellowish-brown (10YR 5/8) silty clay loam; few, fine, faint, light yellowish-brown mottles; moderate, medium, subangular blocky structure; friable; few fine roots; common, thin, patchy clay films on ped surfaces; 5 percent iron and manganese concretions; strongly acid; clear, smooth boundary.

B23t—26 to 30 inches, yellowish-brown (10YR 5/8) silty clay loam; few, fine, faint, light yellowish-brown mottles and common, medium, distinct, yellowish-red mottles; moderate, medium, subangular blocky structure; friable; common, thin, patchy clay films on ped surfaces; slightly compact and brittle; 8 percent black concretions; strongly acid; clear, irregular boundary.

Bx—30 to 50 inches, mottled gray (10YR 5/1) and yellowish-brown (10YR 5/8) clay loam or silty clay loam; few, medium, distinct, yellowish-red mottles; moderate, medium, subangular blocky structure; friable or firm; many thin clay films on most ped surfaces; compact and brittle; 10 percent black concretions; few quartz and chert pebbles; grayish-brown (10YR 5/2) loamy material in polygonal cracks; slightly acid; gradual, irregular boundary.

C—50 to 72 inches, gray (10YR 5/1) clay loam, common, medium, distinct, yellowish-brown mottles; massive; firm; 8 percent black concretions; few quartz and chert pebbles; neutral.

Depth to the fragipan ranges from 20 to 36 inches, and depth to bedrock is more than 5 feet. Reaction is slightly acid in the A and B21t horizons, strongly acid in the B22t and B23t horizons, slightly acid in the Bx horizon, and neutral in the C horizon. The Ap horizon ranges from dark grayish brown to pale brown and is 4 to 12 inches thick. The Bt horizon ranges from strong brown to light olive brown and is silt loam or silty clay loam. The lower part of the Bt horizon is mottled with shades of brown, olive, and red in places. The Bx horizon is typically mottled with shades of gray, yellow, brown, and red, or in places it has a dominant strong-brown to light olive-brown matrix color and common to many mottles of gray, red, and yellow. The Bx horizon ranges from loam to silty clay loam to clay loam. The C horizon is variable and ranges from stratified sand and gravel to firm clay loam or silty clay. The color is extremely variable.

Leadvale soils are in association with Cane, Choccolocco, Decatur, Dewey, Locust, McQueen, and Wickham soils. They are finer textured in the upper part of the subsoil than Locust soils. They are not so red as Cane soils. They are not so well drained as Choccolocco, Decatur, Dewey, McQueen, and Wickham soils. They have a fragipan, but Choccolocco, Decatur, Dewey, McQueen, and Wickham do not.

Leadvale silt loam (ld).—This is the only Leadvale soil mapped in the county. It has the profile described as representative of the series. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Chewacla, Choccolocco, Locust, McQueen, and Wickham soils and a few areas where the surface layer is loam.

This Leadvale soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate in the upper part of the subsoil and moderately slow in the fragipan. The available water capacity is medium.

This soil is fairly well suited to most crops grown in the county. It is easy to work, but it is late to warm up in spring. If tilled too wet, crusts form and at times cause poor crop stands. There is a seasonal high, perched water table, and many of the low areas are subject to infrequent flooding for very brief periods. Erosion is not a hazard. Capability unit IIw–8; woodland group 3o7.

Lee Series

The Lee series consists of deep, poorly drained, nearly level soils. These soils formed in alluvium washed from limestone, cherty limestone, slate, sandstone, and shale. They are on first bottoms.

In a representative profile the surface layer is dark grayish-brown silt loam 4 inches thick. The uppermost 16 inches of the subsoil is friable gray loam mottled with brown; the next 20 inches is firm, gray sandy clay loam that has a few olive mottles. The lowermost 28 inches of subsoil is firm, mottled gray, yellowish-brown, and light yellowish-brown sandy clay loam. The underlying 12 inches of material is firm, light-gray sandy clay loam that has common pale-brown mottles.

About one-third of the acreage is cleared and is used for pasture or is idle. The native vegetation is mainly mixed lowland hardwoods, but there are a few pine.

Representative profile of Lee silt loam, 0 to 2 percent slopes, in a wooded area about 1 mile east-southeast of the hangar of Talladega Municipal Airport, and one-sixteenth mile north of Eastaboga Creek, NE¼NE¼ sec. 7, T. 17 S., R. 6 E.:

A1—0 to 4 inches, dark grayish-brown (2.5Y 4/2) silt loam; weak, fine, granular structure; very friable; many fine roots; strongly acid; gradual, wavy boundary.

B1g—4 to 20 inches, gray (10YR 5/1) loam; many, medium, faint, brown mottles; weak, medium, subangular blocky structure; friable; few fine and medium roots; 3 to 5 percent small chert fragments; strongly acid; gradual, wavy boundary.

B21g—20 to 40 inches, gray (10YR 5/1) sandy clay loam; few, fine, faint, olive mottles; massive; firm; 3 to 5 percent small chert fragments; strongly acid; gradual, wavy boundary.

B22g—40 to 48 inches, mottled gray (10YR 5/1), yellowish-brown (10YR 5/6), and light yellowish-brown (2.5Y 6/4) sandy clay loam; massive; firm; 3 to 5 percent small chert fragments; few, small, black concretions; strongly acid; gradual, wavy boundary.

Cg—48 to 55 inches, light-gray (N 6/0) sandy clay loam; common, medium, distinct, pale-brown mottles; massive; firm; 3 to 5 percent small chert fragments; few, small, black concretions; strongly acid.

The solum ranges from 4 to more than 6 feet in thickness. The reaction is strongly acid throughout the profile. The chert content in the profile ranges from 3 to 30 percent. The A horizon ranges from dark grayish brown to light gray. The B horizon ranges from gray to light olive gray and generally is mottled with shades of brown, yellow, and olive. The B horizon ranges from loam to sandy clay loam to clay loam. The C horizon is dominantly gray, mottled with shades of brown and yellow and ranges from sandy loam to silty clay.

Lee soils are in association with Chenneby, Chewacla, Dowellton, Guthrie, Lobelville, and Sylacauga soils. They are not so fine textured as Dowellton soil. They do not have a fragipan as do Guthrie soils. They are not so well drained as Chenneby, Chewacla, Lobelville, and Sylacauga soils.

Lee silt loam (le).—This is the only Lee soil mapped in the county. It has the profile described as representative of the series. This soil is subject to very frequent flooding for brief periods. It has 0 to 2 percent slopes.

Included with this soil in mapping are small areas of Chenneby, Chewacla, Dowellton, and Guthrie soils; and areas about 25 percent of the acreage, where the surface layer is cherty silt loam.

This Lee soil is medium in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

The poor drainage, flooding, and brief periods of standing water make this soil poorly suited to cultivated crops. If the soil is artificially drained, it is suited to some row crops. It is suited to some pasture grasses and clovers and to woodland. The lack of suitable outlets normally makes drainage impractical. Capability unit IVw–17; woodland group 2w9.

Lobelville Series

The Lobelville series consists of deep, moderately well drained, nearly level soils. These soils developed in alluvium derived mainly from cherty limestone, sandstone, shale, and slate. These soils are on first bottoms.

In a representative profile the surface layer is brown loam 7 inches thick, and the subsurface layer is 6 inches of dark-brown loam. The uppermost layer of the subsoil, 10 inches thick, is friable, grayish-brown cherty silt loam that has a few brownish-yellow and dark-brown mottles; the next 14 inches is friable, grayish-brown cherty loam that has a few olive-yellow and common light-gray mottles. The lowermost layer, 33 inches thick, is friable, gray clay loam mottled with strong brown and yellowish brown.

About half the acreage has been cleared. Some areas are idle, and others have been reforested with pine. Corn, soybeans, pasture, and hay are the principal crops. The native vegetation is mixed hardwoods and a few pine.

Representative profile of Lobelville loam, 0 to 2 percent slopes, in a pasture one-eighth mile southeast of Pattons Chapel Church and 100 feet east of a road, NE¼SW¼ sec. 13, T. 16 S., R. 5 E.:

Ap—0 to 7 inches, brown (10YR 4/3) loam; weak, fine, granular structure and weak, fine, subangular blocky structure; very friable; many fine roots; medium acid; gradual, wavy boundary.

A1—7 to 13 inches, dark-brown (10YR 3/3) loam; weak, fine, granular and fine subangular blocky structure; very friable; few fine roots; 3 percent manganese concretions; strongly acid; clear, wavy boundary.

B1—13 to 23 inches, grayish-brown (10YR 5/2) cherty silt loam; few, fine, faint, brownish-yellow mottles and few, medium, distinct dark-brown mottles; weak, fine, granular structure and weak, fine, subangular blocky structure; friable; few fine roots; 10 to 15 percent small chert fragments; 5 percent manganese concretions; very strongly acid; gradual, wavy boundary.

B2—23 to 37 inches, grayish-brown (10YR 5/2) cherty loam; few, medium, distinct, olive-yellow mottles and common, medium, distinct, light-gray mottles; weak, medium, subangular blocky structure; friable; few fine roots; 15 percent small chert fragments; 15 percent manganese concretions; very strongly acid; gradual, wavy boundary.

B3—37 to 70 inches, gray (N 5/0) clay loam; common, medium, distinct, strong-brown mottles and few, medium, distinct, yellowish-brown mottles; massive; friable; very strongly acid.

The solum ranges from 40 to more than 60 inches in thickness. Reaction ranges from medium acid to strongly acid in the A horizon, and is very strongly acid in the B horizon. The upper 40 inches of the profile is a few percent to about 35 percent chert fragments. In places the percentage is higher below a depth of 40 inches. The A horiozn ranges from dark brown to brown and from loam to silt loam. The B1 horizon ranges from grayish brown to brown and generally has few to common gray or brown mottles. The B2 horizon generally ranges from gray to brown and is mottled with shades of

gray, yellow, or brown. In places it does not have a dominant matrix color and is mottled with shades of gray, brown, and yellow. The B2 horizon ranges from cherty loam to cherty silty clay loam. The amount of gray generally increases in the lower part of the B horizon and is mottled with brown and yellow. The B3 horizon ranges from sandy loam to silty clay. In some areas below a depth of 40 inches, the underlying material is gravel or chert beds.

Lobelville soils are associated with Bodine, Dewey, Fullerton, Lee, Melvin, Minvale, and Toccoa soils. They are better drained than Lee and Melvin soils and are more poorly drained and finer textured than Toccoa soils. They are more poorly drained than Bodine, Dewey, Fullerton, and Minvale soils, and they lack the distinct horizon development of those soils.

Lobelville loam (lm).—This is the only Lobelville soil mapped in the county. It has the profile described as representative of the series. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Chenneby, Chewacla, Lee, Locust, and Toccoa soils; and areas, about 35 percent of the acreage, where chert fragments cover 10 to 30 percent of the surface. Also included are small areas of soils that are well drained and areas along small drainageways that have a seasonal high water table and at times are flooded.

This Lobelville soil is medium in natural fertility and organic-matter content. Water enters and moves through this soil at a moderate rate. The available water capacity is medium.

This soil is fairly well suited to most crops grown in the county. It can be tilled throughout a moderately wide range of moisture content without clods or crusts forming. It is subject to very frequent flooding for extremely brief periods, and crops are sometimes damaged. Erosion is not a hazard except where floods cause scouring. Capability unit IIw-7; woodland group 2w8.

Locust Series

The Locust series consists of deep, moderately well drained, cherty soils. These soils formed in colluvial and alluvial material derived from sandstone, shale, and cherty limestone. They are on stream terraces, foot slopes, benches, and alluvial fans.

In a representative profile the surface layer is brown silt loam 8 inches thick. The upper part of the subsoil, about 16 inches thick, is friable, olive-yellow loam. The lower part, about 40 inches thick, is compact, mottled olive-yellow, light yellowish-brown, and light olive-gray loam grading to gravelly sandy loam at a depth of about 50 inches. The underlying material is compact sand and sandstone, shale, chert, and quartz gravel.

About 60 percent of the acreage is cleared and is used for cotton, corn, soybeans, pasture, and hay. Some areas are idle, and others have been reforested with pine. The native vegetation is mixed hardwoods and pine.

Representative profile of Locust silt loam, 0 to 2 percent slopes, in an idle field 7 miles west of Talladega, 1 mile south of Jonesview School, and 100 feet north of a gravel road, SW¼SE¼ sec. 28, T. 18 S., R. 4 E.:

Ap—0 to 8 inches, brown (10YR 4/3) silt loam; weak, fine, granular structure; very friable; many fine roots; few worm casts; few quartz pebbles; strongly acid; abrupt, smooth boundary.

B2t—8 to 24 inches, olive-yellow (2.5Y 6/6) loam; moderate, fine and medium, subangular blocky structure; friable; common fine roots; few, very thin, patchy clay films on ped surfaces; few, soft, strong-brown concretions; few quartz pebbles; old root channels filled with material from Ap horizon; very strongly acid; clear, irregular boundary.

Bx1—24 to 28 inches, mottled olive-yellow (2.5Y 6/6) and light yellowish-brown (2.5Y 6/4) loam; common, medium, distinct, gray and light olive-gray mottles and few, medium, distinct, brownish-yellow mottles; moderate, medium, subangular blocky structure; friable to firm; slightly compact and brittle; few fine roots; common, thin, patchy clay films on ped surfaces; very strongly acid; clear, irregular boundary.

Bx2—28 to 39 inches, mottled light olive-gray (5Y 6/2), light yellowish-brown (2.5Y 6/4), and olive-yellow (2.5Y 6/6) loam; moderate, medium, subangular blocky structure; hard, firm, compact, and brittle; many, thin, patchy clay films on ped surfaces; few black concretions; few small pebbles; few tongues of light-gray silty clay loam; strongly acid; clear, irregular boundary.

Bx3—39 to 51 inches, mottled light yellowish-brown (2.5Y 6/4) and olive-yellow (2.5Y 6/6) sandy loam or loam; common, medium, distinct, light olive-gray mottles; moderate, medium and coarse, subangular blocky structure; hard, firm, very compact and brittle; common, thin, patchy clay films on ped surfaces; few black concretions; few small gravel; few tongues of light-gray silty clay loam; very strongly acid; clear, irregular boundary.

Bx4—51 to 64 inches, mottled light olive-gray (5Y 6/2), light yellowish-brown (2.5Y 6/4), and brownish-yellow (10YR 6/8) gravelly sandy loam; moderate, medium, subangular blocky structure; firm; compact in place, brittle; few, thin, patchy clay films on ped surfaces; 40 percent black concretions; common sandstone, shale, quartz, and chert pebbles; very strongly acid; clear, irregular boundary.

C—64 to 70 inches, compact sand and sandstone, shale, chert, and quartz pebbles; extremely difficult to dig with hand tools; massive in place; few black concretions; very strongly acid.

Depth to bedrock is 4 to more than 6 feet. The depth to the fragipan ranges from 20 to 36 inches. Reaction is strongly acid in the A horizon, very strongly acid in the Bt horizon and is strongly to very strongly acid in the Bx horizon. Small brown and black concretions range from few to many. Fragments on the surface and in the solum range from 0 to 35 percent by volume and from one-fourth inch to 6 inches in size. The A1 horizon ranges from very dark gray to dark grayish brown. The Ap horizon ranges from dark grayish brown to brown. It is silt loam to cherty silt loam. The upper part of the subsoil ranges from yellowish brown to olive yellow and is loam to clay loam. The Bx horizon is distinctly to prominently mottled with shades of gray, yellow, brown, and red. It ranges from fine sandy loam to silty clay loam and may be cherty or gravelly. The C horizon, normally below a depth of 50 inches, is extremely variable and ranges from compact chert or sand and gravel to clay.

Locust soils are associated with Allen, Anniston, Bodine, Cane, Dewey, Leadvale, and Minvale soils. They are more poorly drained than Allen, Anniston, Bodine, Dewey, and Minvale soils. They have a fragipan, but Allen, Anniston, Bodine, Dewey, and Minvale soils do not. They are not so red as Cane soils. They are not so silty as Leadvale soils.

Locust silt loam, 0 to 2 percent slopes (loA).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas of Allen, Anniston, Leadvale, and Lobelville soils and areas where the surface layer is loam.

The Locust soil is low in natural fertility and in organic-matter content. Water enters the soil readily and moves through it at a moderate rate to the fragipan where it moves slowly. The available water capacity is medium.

This soil is fairly well suited to most crops grown in the county. It is easily worked and can be tilled through-

out a medium range of moisture content without clodding or crusting. It is slow to warm up in spring because of the seasonal high, perched water table. Erosion is not a hazard. Capability unit IIw–8; woodland group 3o7.

Locust silt loam, 2 to 6 percent slopes (LoB).—This soil has a plow layer of brown silt loam 4 inches thick. The upper part of the subsoil, about 16 inches thick, is yellowish-brown clay loam. It is underlain by a compact and brittle clay loam fragipan that is olive yellow mottled with light gray and strong brown in the upper part. The lower part of the fragipan is mottled light yellowish-brown, light-gray, and strong-brown loam. The fragipan is thicker than 40 inches.

Included with this soil in mapping are small areas of Allen, Anniston, Cane, and Lobelville soils, small gravelly areas, and areas where the surface layer is loam.

This Locust soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through the upper part of the profile at a moderate rate but moves slowly in the fragipan. The available water capacity is medium.

This soil is fairly well suited to most crops grown in the county. It is easy to work and can be tilled throughout a fairly wide range of moisture content without clodding or crusting. It is slow to warm up in spring because of the seasonal high, perched water table. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–5; woodland group 3o7.

Locust cherty silt loam, 2 to 6 percent slopes (LtB).—This soil has a surface layer of dark grayish-brown cherty silt loam 6 inches thick. The upper part of the subsoil, about 18 inches thick, is yellowish-brown light silty clay loam. It is underlain by a compact and brittle fragipan that is yellowish-brown cherty loam mottled with strong brown and light brownish gray. The fragipan is more than 40 inches thick.

Included with this soil in mapping are small areas of Bodine, Lobelville, and Minvale soils, small areas where slopes are 2 percent, and small areas where 5 to 10 percent of the surface is covered with chert fragments.

This Locust soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through the upper part at a moderate rate. Water movement in the fragipan is slow. The available water capacity is medium. At times during short periods of drought, plants are damaged from lack of water.

This soil is fairly well suited to most crops grown in the county. Chert fragments on the surface interfere with tillage in most areas. The soil is fairly easy to work and can be tilled throughout a fairly wide range of moisture content without clodding or crusting. It has a seasonal high, perched water table that at times delays planting in the spring. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–5; woodland group 3o7.

Masada Series

The Masada series consists of deep, well-drained soils. These soils formed in local alluvium or colluvium from slate on foot slopes, benches, and fans.

In a representative profile the surface layer is dark yellowish-brown slaty loam 5 inches thick. The uppermost 6 inches of the subsoil is yellowish-brown, friable loam; the next 13 inches is yellowish-brown, friable clay loam; the next 21 inches is yellowish-red, friable gravelly clay loam mottled with yellowish brown. The lowermost 25 inches of the subsoil is mottled yellowish-brown, strong-brown, and red, friable loam.

About one-third of the acreage is cleared and is used for crops or pasture. Some areas have been reforested with pine. The native vegetation is mixed hardwoods and pine.

Representative profile of Masada slaty loam, 2 to 8 percent slopes, in a pasture 1 mile south of Winterboro and three-eighths of a mile east of Alt. U.S. Highway No. 231, SE¼NE¼ sec. 11, T. 20 S., R. 4 E.:

Ap—0 to 5 inches, dark yellowish-brown (10YR 4/4) slaty loam; weak, fine, granular structure; very friable; many fine and few medium roots; few small shale fragments; strongly acid; gradual, smooth boundary.

B1—5 to 11 inches, yellowish-brown (10YR 5/6) loam; weak, medium, subangular blocky structure; friable; few fine and medium roots; few small slate and quartz fragments; few, very thin, patchy clay films on ped surfaces; very strongly acid; gradual, wavy boundary.

B21t—11 to 24 inches, yellowish-brown (10YR 5/8) clay loam; moderate, medium, subangular blocky structure; friable; few fine and medium roots; few small slate and quartz fragments; common, thin, patchy clay films on ped surfaces; very strongly acid; gradual, wavy boundary.

B22t—24 to 45 inches, yellowish-red (5YR 4/8) gravelly clay loam; common, medium, distinct, yellowish-brown mottles; weak, medium, subangular blocky structure; friable; few fine roots; common, thin, patchy clay films on ped surfaces; many small slate and quartz fragments; very strongly acid; gradual, wavy boundary.

B3t—45 to 70 inches, mottled yellowish-brown (10YR 5/8), strong-brown (7.5YR 5/6), and red (2.5YR 4/8) loam; weak, medium, subangular blocky structure; friable; few fine roots; few, thin, patchy clay films; common small slate fragments; few fine mica flakes; very strongly acid.

The solum ranges from 40 to 70 inches in thickness. Depth to bedrock ranges from 3½ to 6 feet or more. Reaction is strongly acid in the A horizon and very strongly acid in the B horizon. The profile is 2 to 35 percent slate fragments. The A1 horizon ranges from dark gray to dark grayish brown and is 2 to 4 inches thick. The A2 or Ap horizon ranges from dark yellowish brown to pale brown. The B1 horizon ranges from yellowish brown to brownish yellow and from loam to clay loam. The B21t horizon ranges from strong brown to light olive brown and from loam to silty clay loam. The B22t horizon has a matrix color of strong brown to yellowish red in places, but generally it is mottled with shades of red, brown, and yellow. The B3t horizon is mottled with shades of red, brown, and yellow. It is fine sandy loam to clay loam. Bedrock consists of broken, highly fractured slate.

Masada soils are associated with Chenneby, Chewacla, Choccolocco, McQueen, Tallapoosa, Tatum, and Wickham soils. They are better drained than Chenneby and Chewacla soils. They have more coarse fragments and less silt than Choccolocco soils. They have a coarser textured subsoil than McQueen and Tatum soils. They have a thicker solum than Tallapoosa soils. Their subsoil is browner than the Wickham subsoil.

Masada slaty loam, 2 to 8 percent slopes (MaB).—This is the only Masada soil mapped in the county. It has the profile described as representative of the series.

Included with this soil in mapping are small areas of soils that have a silt loam surface layer; small areas of Chewacla, Tallapoosa, Tatum, and Wickham soils; and

small areas of Masada soils where slopes range from 8 to 12 percent.

This Masada soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium.

This soil is well suited to all crops commonly grown in the county. It is easy to work and can be tilled throughout a wide range of moisture content without clods or crusts forming. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–3; woodland group 3o7.

McQueen Series

The McQueen series consists of deep, well-drained soils. These soils formed in material washed from slate, limestone, sandstone, and shale. They are on low stream terraces and are subject to frequent flooding for extremely brief periods.

In a representative profile the surface layer is brown silt loam 10 inches thick. The uppermost 18 inches of the subsoil is firm, yellowish-red silty clay loam; the next 8 inches is friable, strong-brown silty clay loam; and the lowermost 6 inches of the subsoil is friable, dark-brown sandy loam. The underlying material is 30 inches of friable sandy loam or loamy sand grading to yellowish-brown sand in the lower part.

Nearly all the acreage has been cleared and is used for crops or pasture. The native vegetation is mixed hardwoods and a few pine.

Representative profile of McQueen silt loam, 0 to 2 percent slopes, in a soybean field, 1½ miles northeast of Munford, on a low terrace of Salt Creek, SE¼NE¼ sec. 20, T. 17 S., R. 7 E.:

Ap—0 to 10 inches, brown (10YR 4/3) silt loam; weak, fine, granular structure; friable; common fine roots; medium acid; abrupt, smooth boundary.

B21t—10 to 28 inches, yellowish-red (5YR 5/6) silty clay loam; moderate, medium, subangular blocky structure; firm; few fine roots; thin nearly continuous clay films on ped surfaces; medium acid; gradual, wavy boundary.

B22t—28 to 36 inches, strong-brown (7.5YR 5/6) silty clay loam; weak to moderate, medium, subangular blocky structure; friable; few fine roots; common thin clay films on most ped surfaces; medium acid; gradual, wavy boundary.

B3—36 to 42 inches, dark-brown (7.5YR 4/4) sandy loam; weak, medium, subangular blocky structure; very friable; few, very thin, patchy clay films on ped surfaces; very strongly acid; gradual, wavy boundary.

C1—42 to 63 inches, dark-brown (7.5YR 4/4) sandy loam or loamy sand; single grain; very friable; few mica flakes; very strongly acid; gradual, wavy boundary.

C2—63 to 72 inches, yellowish-brown (10YR 5/4) sand; single grain; very friable; few mica flakes; very strongly acid.

The solum ranges from 40 to more than 60 inches in thickness. Depth to bedrock is more than 6 feet. Mica flakes range from none to common in the profile. Reaction is medium acid in the A horizon, medium acid in the B horizon to a depth of 36 inches, and very strongly acid below that depth. The Ap horizon ranges from strong brown to brown and is 4 to 15 inches thick. The upper part of the Bt horizon ranges from strong brown to red. It is silty clay loam or silty clay. The lower part of the Bt horizon ranges from yellowish brown to yellowish red. It is loam to silty clay loam. The B3 horizon ranges from yellowish red to light olive brown and is mottled with shades of brown in places. It is sandy loam to sandy clay loam. The C horizon has about the same color range as the B3 horizon. It ranges from sandy loam to stratified sand and gravel.

McQueen soils are associated with Chenneby, Chewacla, Choccolocco, Leadvale, Sylacauga, Toccoa, and Wickham soils. They are redder and better drained than Sylacauga soils. They do not have a fragipan as do Leadvale soils. They are better drained and have more distinct horizonation than Chenneby and Chewacla soils. They are redder and finer textured than Choccolocco soils. They are finer textured than Wickham soils. They are finer textured than Toccoa soils and have distinct subsoil development, which Toccoa soils do not have.

McQueen silt loam, 0 to 2 percent slopes (McA).—This soil has the profile described as representative of the McQueen series.

Included with this soil in mapping are small areas of Chenneby, Chewacla, Choccolocco, Sylacauga, Toccoa, and Wickham soils.

This McQueen soil is low in natural fertility and organic-matter content. Water enters this soil readily and moves through it at a moderate rate. The available water capacity is medium to high.

This soil is well suited to most crops grown in the county. It is easy to work but can only be tilled throughout only a medium range of moisture content without clodding or crusting. Erosion is not a hazard. The soil is subject to frequent flooding for extremely brief periods, mainly late in winter and in spring, but crops are seldom damaged. Capability unit I–2; woodland group 3o7.

McQueen silt loam, 2 to 6 percent slopes (McB).—This soil has a plow layer of strong-brown silt loam 4 to 8 inches thick. The upper part of the subsoil, about 40 inches thick, is red silty clay or silty clay loam. The lower part, about 10 inches thick, is yellowish-red sandy clay loam that has a few yellowish-brown mottles. The underlying material is strong-brown, stratified sand and gravel.

Included with this soil in mapping are small areas of Choccolocco, Sylacauga, and Wickham soils.

This McQueen soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through the profile at a moderate rate. The available water capacity is medium to high.

This soil is well suited to most crops grown in the county. It is easy to work and can be tilled throughout a moderately wide range of moisture content without clods or crusts forming. Erosion is a slight to moderate hazard in tilled areas. Except for higher areas, the soil is susceptible to infrequent flooding for extremely brief periods, mainly late in winter and in spring, but crops are seldom damaged. Capability unit IIe–4; woodland group 3o7.

Melvin Series

The Melvin series consists of deep, poorly drained, nearly level soils. These soils formed in alluvium from limestone. They are on first bottoms and are subject to very frequent flooding of long duration.

In a representative profile the surface layer is 3 inches of dark-brown silt loam and 8 inches of grayish-brown silt loam. The uppermost 14 inches of the underlying material is firm, gray silty clay loam; the next 11 inches is firm, dark-gray silty clay loam mottled with olive.

The next 18 inches is dark-gray silty clay loam. At a depth of 54 inches is hard limestone rock.

Most of the acreage is in woodland. The few areas cleared are used for pasture or are idle. The native vegetation is mixed lowland hardwoods, such as willow, sweetgum, blackgum, water oak, and maple.

Representative profile of Melvin silt loam, 0 to 2 percent slopes, in a pasture 6¼ miles northeast of Talladega, NW¼SE¼ sec. 28, T. 17 S., R. 6 E.:

Ap—0 to 3 inches, dark-brown (10YR 3/3) silt loam; weak, fine, granular structure; friable; many fine and medium roots; neutral; gradual, smooth boundary.

A1g—3 to 11 inches, grayish-brown (10YR 5/2) silt loam; common, medium, distinct, brown mottles; weak, fine, granular structure and weak, fine, subangular blocky structure; common fine and medium roots; neutral; gradual, wavy boundary.

C1g—11 to 25 inches, gray (N 5/0) silty clay loam; massive; firm; few medium roots; few small pebbles; neutral; gradual, wavy boundary.

C2g—25 to 36 inches, dark-gray (5Y 4/1) silty clay loam; common, medium, distinct, olive mottles; massive; firm; few small chert fragments; mildly alkaline; gradual, wavy boundary.

C3g—36 to 54 inches, dark-gray (5Y 4/1) silty clay loam; massive; firm; common chert fragments; mildly alkaline; abrupt, smooth boundary.

R—54 inches +, hard limestone rock.

Thickness of the solum and depth to bedrock range from 36 to 60 inches. Reaction is neutral in the A horizon and neutral to mildly alkaline in the C horizon. The A1 horizon ranges from dark gray to dark brown and in places is mottled with light gray or brown. The Ap horizon ranges from dark brown to light brownish gray. The C horizon ranges from dark gray to light gray and in places has common to many mottles in shades of brown, yellow, and olive. It is silt loam or silty clay loam.

The soil temperature is a few degrees higher than normal for the series but this difference does not materially affect management.

Melvin soils are associated with Beason, Dowellton, Guthrie, and Lee soils. They contain more silt and less clay than Dowellton soils. They are finer textured and more silty than Lee soils. They do not have a fragipan as do Guthrie soils. They are more poorly drained and less clayey in the subsoil than Beason soils.

Melvin silt loam (Me).—This is the only Melvin soil mapped in the county. It has the profile described as representative of the series. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Dowellton, Guthrie, and Lee soils.

This Melvin soil is high in natural fertility and medium in organic-matter content. Infiltration is moderate, and permeability is moderately slow. The available water capacity is high.

The poor drainage, very frequent flooding, and brief periods of standing water make this soil poorly suited to cultivated crops. The soil is suited to pasture grasses and to woodland. If artificially drained, it is fairly well suited to row crops. Erosion is not a hazard except where floods cause scouring. Capability unit IVw–17; woodland group 2w9.

Minvale Series

The Minvale series consists of deep, well-drained, cherty soils. These soils formed on foot slopes in colluvium from cherty limestone and on the hillsides and ridgetops in residuum from cherty limestone.

In a representative profile the surface layer is very dark grayish-brown cherty silt loam 3 inches thick, and the subsurface layer is 4 inches of dark yellowish-brown loam. The uppermost 9 inches of subsoil is friable, strong-brown loam; the next 17 inches is friable, yellowish-red clay loam; the next 32 inches is firm, yellowish-red cherty clay loam mottled with brownish yellow, light yellowish brown, and red. The lowermost 15 inches is firm, mottled yellow, reddish-yellow, and light yellowish-brown very cherty clay loam.

About 25 percent of the acreage has been cleared and is used for crops or pasture or is idle. The native vegetation is mixed hardwoods and pine.

Representative profile of Minvale cherty silt loam, 2 to 6 percent slopes, in a wooded area 4 miles southwest of Lincoln, NW¼NW¼ sec. 7, T. 17 S., R. 5 E.:

A1—0 to 3 inches, very dark grayish-brown (10YR 3/2) cherty silt loam; weak, fine, granular structure; very friable; many fine roots; 20 percent small chert fragments; very strongly acid; clear, smooth boundary.

A2—3 to 7 inches, dark yellowish-brown (10YR 4/4) loam; weak, fine, granular structure; very friable; few fine and medium roots; 5 to 10 percent small chert fragments; very strongly acid; gradual, wavy boundary.

B1—7 to 16 inches, strong-brown (7.5YR 5/6) loam; weak, fine, granular structure and weak, medium, subangular blocky; friable, very slightly sticky; few fine roots; 5 percent small chert fragments; very few, thin, patchy clay films, mostly in pores; very strongly acid; gradual, wavy boundary.

B21t—16 to 33 inches, yellowish-red (5YR 5/8) clay loam; moderate, fine and medium, subangular blocky structure; friable, sticky, plastic; few medium roots; 5 to 10 percent small chert fragments; common, very thin, patchy clay films in pores and on ped surfaces; very strongly acid; clear, wavy boundary.

B22t—33 to 65 inches, yellowish-red (5YR 4/8) cherty clay loam; common, medium, prominent, brownish-yellow, light yellowish-brown, and red mottles; moderate, medium, angular blocky structure; firm, sticky, plastic; 30 percent chert fragments; common, very thin, patchy clay films on ped surfaces; very strongly acid; gradual, wavy boundary.

B3—65 to 80 inches, mottled yellow (10YR 7/8), reddish-yellow (5YR 6/8), and light yellowish-brown (10YR 6/4) very cherty clay loam; massive; firm; 50 to 75 percent chert fragments; very strongly acid.

Thickness of the solum and depth to bedrock range from 6 to more than 8 feet. Reaction is very strongly acid throughout the A and B horizons. Chert content ranges from about 4 to 30 percent in the upper 40 inches of the solum, and in places the percentage is higher below this depth. The A1 horizon ranges from very dark gray to dark grayish brown and is 2 to 6 inches thick. The A2 or Ap horizon ranges from dark yellowish brown to brown. The B1 horizon ranges from yellowish brown to yellowish red and from loam to silty clay loam. The B21t horizon ranges from strong brown to red and from heavy loam to silty clay loam. The B22t horizon ranges from yellowish red to dark red and in places is mottled with shades of brown and yellow. It is clay loam to clay. The B3 horizon is normally mottled with shades of red, yellow, brown, and gray. It is cherty clay loam to cherty clay.

Minvale soils are associated with Bodine, Cane, Dewey, Fullerton, Lobelville, and Locust soils. They are coarser textured than Dewey and Fullerton soils. They have a redder color and a lower chert content than Bodine soils. They do not have a fragipan as do Cane and Locust soils. They are better drained than Lobelville soils.

Minvale cherty silt loam, 2 to 6 percent slopes (MnB).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas of soils that have a yellowish-brown silty clay loam

subsoil and a few areas of soils that are eroded and have a reddish-brown clay loam surface layer.

This Minvale soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium.

This soil is suited to all crops commonly grown in the county. It is fairly easy to work and can be tilled throughout a wide range of moisture content without clods or crusts forming. In some areas the chert fragments on the surface interfere with tillage. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–3; woodland group 3o7.

Minvale cherty silt loam, 6 to 10 percent slopes (MnC).—This soil has a surface layer of dark-brown cherty silt loam 6 inches thick. The upper part of the subsoil is yellowish-brown loam 5 inches thick. The next 18 inches is strong-brown light clay loam, and the next 10 inches is yellowish-red cherty clay loam. The underlying material is mottled yellowish-red, red, strong-brown, and reddish-yellow cherty clay. The chert fragments are less than 5 inches in diameter.

Included with this soil in mapping are small areas of Dewey and Fullerton soils and small areas of soils that are eroded and have a surface layer of yellowish-red cherty clay.

This Minvale soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is suited to all crops commonly grown in the county. It is fairly easy to work and can be tilled throughout a wide range of moisture content without clods or crusts forming. In some areas the chert fragments on the surface interfere with tillage. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–10; woodland group 3o7.

Minvale-Bodine association, hilly (MoE).—Soils in this association are on very narrow ridgetops and short hillsides, and are widely distributed throughout the western two-thirds of the county. They formed from cherty limestone. Slopes are complex. They range from 10 to 35 percent but are dominantly 20 to 30 percent. Rock outcrops or limestone boulders are common throughout the areas. Small sinkholes also are common. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

Minvale soils make up about 44 percent of the acreage, Bodine soils about 36 percent, and soils of minor extent the remaining 20 percent. The percentages of Minvale and Bodine soils vary for each delineation. The percentage for Minvale soils ranges from 35 to 55 percent and for Bodine soils from 25 to 45 percent.

Minvale soils are mainly on the middle and lower slopes. They have a surface layer of very dark gray and dark yellowish-brown cherty silt loam 8 inches thick. The upper part of the subsoil, about 14 inches thick, is yellowish-red cherty light clay loam. The lower part, over 3 feet thick, is red cherty clay loam mottled with brownish yellow. Depth to bedrock is more than 6 feet. These soils are low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

Bodine soils are mainly on the upper hillsides and the ridgetops. They have a surface layer of dark-brown and yellowish-brown cherty loam 12 inches thick. The upper part of the subsoil, about 18 inches thick, is brownish-yellow cherty loam. The lower part, more than 30 inches thick, is strong-brown cherty clay loam. The percentage of chert fragments on the surface ranges from 0 to more than 75 percent. The content of chert in the subsoil ranges from 40 to 50 percent. Depth to bedrock is more than 6 feet. These soils are low in natural fertility and organic-matter content. Infiltration rate is medium, and permeability is moderately rapid. The available water capacity is low.

Less extensive in this association are the Allen, Anniston, Decatur, Dewey, and Lobelville soils. Fullerton soils make up 7 percent of the association and are mainly on upper slopes and ridgetops. Allen soils make up 3 percent of the association; Anniston soils, 1 percent; Decatur soils, 1 percent; and Dewey soils, 6 percent. They are mainly on middle and lower slopes. Lobelville soils make up 2 percent of the association and are in narrow drainageways.

Also in this association are a few areas where slopes are more than 35 percent and a few eroded areas where the surface layer is reddish-brown cherty clay loam.

The steep slopes and very high erosion hazard make these soils unsuited to cultivated crops. Under good management, the soils that have slopes of less than 25 percent are suitable for pasture. A few small areas where slopes are less than 25 percent have been cleared and are used for pasture (fig. 10).

In many areas chert fragments on the surface interfere with tillage. These soils are well suited to woodland. The native vegetation is mixed hardwoods and pine. Capability unit VIe–19; woodland group 3f8.

Montevallo Series

The Montevallo series consists of shallow, well-drained, shaly soils. These soils formed in residuum from shale or shale interbedded with sandstone.

In a representative profile the surface layer is very dark grayish-brown shaly silt loam 2 inches thick, and the subsurface layer is 3 inches of light yellowish-brown shaly silt loam. The subsoil, about 6 inches thick, is friable reddish-yellow shaly silt loam. At a depth of 11 inches is highly fractured, platy, partly weathered tilted shale.

Most of the acreage is in woodland. The native vegetation is mainly mixed hardwoods and pine. Virginia pine is the dominant pine.

Representative profile of Montevallo shaly silt loam, 15 to 45 percent slopes, on a wooded hillside 4 miles north of Lincoln, NW¼SE¼ sec. 6, T. 16 S., R. 5 E.:

A1—0 to 2 inches, very dark grayish-brown (2.5Y 3/2) shaly silt loam; weak, fine, granular structure; very friable; many fine and few medium roots; medium acid; abrupt, smooth boundary.

A2—2 to 5 inches, light yellowish-brown (10YR 6/4) shaly silt loam, very pale brown (10YR 7/4) when dry; weak, fine, granular structure; very friable; many fine and few medium roots; medium acid; clear, wavy boundary.

B—5 to 11 inches, reddish-yellow (7.5YR 6/6) shaly silt loam; weak, medium, subangular blocky structure; friable;

Figure 10.—Cattle grazing fescuegrass and clover on Minvale-Bodine association, hilly.

common fine roots; 75 percent, by volume, shale fragments less than 3 inches in diameter; medium acid; clear, irregular boundary.

R—11 to 30 inches, highly fractured, platy, partly weathered, tilted shale; shale fragments coated with light yellowish-brown (10YR 6/4) fines; strongly acid; can dig with hand tools.

Thickness of the solum and depth to bedrock range from 10 to 20 inches. Reaction is medium acid throughout the A and B horizons. The A1 horizon ranges from dark gray to dark reddish gray and is 2 to 5 inches thick. The A2 or Ap horizon ranges from pale brown to weak red. The B horizon ranges from light yellowish brown to weak red and from loam to silty clay loam and the shaly textures. The B horizon is more than 35 percent shale and sandstone fragments. Bedrock consists of fragmented, tilted shale interbedded with sandstone in places.

The color is redder than normal for the Montevallo series, but other characteristics are similar and this difference does not alter the usefulness or behavior of the soils.

Montevallo soils are on the uplands in association with Allen, Enders, Hector, Holston, and Townley soils. They are more shallow and are coarser textured than Enders and Townley soils. They are much more shallow than Allen and Holston soils, which have a solum thicker than 60 inches. They contain more coarse fragments than Hector soils. Montevallo soils are derived from shale, whereas Hector soils are derived from sandstone.

In this county Montevallo soils are mapped only in the Enders-Montevallo association, steep, and in the Enders-Townley-Montevallo complex, 6 to 15 percent slopes.

Rock Land

Rock land consists of areas where 50 to 90 percent of the surface is covered with outcrops, boulders, and fragments of sandstone and quartzite rock. Areas range from about 2 to 15 acres in size. The rocks and rock outcrops range from 6 inches to more than 10 feet in size. Slopes range from 15 to 50 percent. The soil material between the rock outcrops is sandy loam and sandy clay loam and is only about 15 inches deep over bedrock.

Vegetation is mainly scrub oak. There are a few Virginia pines.

Rock land-Hector-Townley association, steep (RhE).—This is an association of soils derived from interbedded sandstone and shale. It occupies the upper one-third of rocky hills in the central and southwestern parts of the county. Slopes range from 15 to 50 percent but are dominantly more than 25 percent. Surface runoff is very rapid. The crests of the narrow ridges and peaks are

extremely rocky (fig. 11); more than 90 percent of the surface is covered with sandstone or quartzite rock. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

Rock land makes up about 40 percent of this association, Hector soils about 29 percent, Townley soils about 20 percent, and soils of minor extent the remaining 11 percent.

Rock land is on the crests of peaks and narrow ridgetops. It consists of very rocky areas where 50 to 90 percent or more of the surface is covered by sandstone or quartzite rock. The rocks range in size from 6 inches to 10 feet in diameter and are close enough together so as to prevent the use of mechanized agricultural and logging equipment. The areas between rocks are very shallow loamy soil material. Slopes range from 15 to 50 percent.

The Hector soil has the profile described as representative of the Hector series. It is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderately rapid. The available water capacity is low.

The Townley soil is on narrow ridgetops and slopes of ridges. It has a surface layer of dark-brown and brown gravelly silt loam 7 inches thick. The subsoil, 17 inches thick, is yellowish-red silty clay mottled with pale brown and brownish yellow in the lower part. The depth to partly weathered shale is 24 inches. This soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderately slow. The available water capacity is medium.

Less extensive in this association are the Allen, Enders, and Montevallo soils. Enders and Montevallo soils are on ridgetops and slopes and the steep Allen soils are on hillsides.

Steep slopes, rock outcrops, and shallow soils make these soils unsuited to cultivated crops and pasture. They are fairly well suited to woodland, but harvesting is extremely difficult where slopes are more than 25 percent. Tree growth is slow.

This association is entirely in woodland. The native vegetation is low grade hardwoods and pine. Capability unit VIIs–23; woodland group 5x3.

Slickens

Slickens (Sk) are deposits of fine-textured sediments that were separated from iron ore when it was washed. These deposits are above dams along small drainageways, are

Figure 11.—Typical scene in the Rock land-Hector-Townley association, steep.

in natural basins, or occur as large mounds. They consist of layers of yellowish-brown to dark-red silt or clay, and in some areas, very thin strata of fine sand or very fine sand. The deposits range from 4 to 20 feet in thickness. The surface layer swells when wet and cracks when dry. The underlying material remains wet during prolonged dry periods. Most areas are planted to loblolly pine.

Slickens deposits occur at Ironaton, southwest of Ironaton, northeast of Munford, and south of Talladega. Capability unit and woodland group not assigned.

Sylacauga Series

The Sylacauga series consists of deep, somewhat poorly drained soils that formed in general alluvium derived from slate, limestone, and shale. These soils are on low stream terraces. They are saturated with water usually late in winter and in spring, and water stands at the surface for brief periods.

In a representative profile the surface layer is light olive-brown silt loam 5 inches thick. The uppermost 9 inches of the friable subsoil is mottled brownish-yellow, light olive-brown, and pale-olive light silty clay loam; the next 25 inches is mottled light yellowish-brown, light-gray, brownish-yellow, and yellowish-brown silty clay loam; the lowermost 11 inches is mottled yellowish-brown, light-gray, light brownish-gray, and light yellowish-brown loam. Between depths of 50 and 60 inches is stratified sand and gravel.

About two-thirds of the acreage has been cleared and is used mainly for pasture. Some areas are idle, and a few are used for crops. The native vegetation is mixed hardwoods and a few scattered pine.

Representative profile of Sylacauga silt loam, 0 to 2 percent slopes, in a pasture 1½ miles north of Fayetteville, 150 feet west of County Road No. 5, and 150 feet south of a gravel road, NE¼NW¼ sec. 35, T. 21 S., R. 2 E.:

Ap—0 to 5 inches, light olive-brown (2.5Y 5/4) silt loam; common, medium, distinct, dark yellowish-brown mottles; top 1 inch is dark grayish brown (10YR 4/2); moderate, fine, granular structure; friable; many fine roots; very strongly acid; clear, smooth boundary.

B1t—5 to 14 inches, mottled brownish-yellow (10YR 6/6), light olive-brown (2.5Y 5/4), and pale-olive (5Y 6/3) silty clay loam; weak, medium, subangular blocky structure; friable; common fine roots; few, thin, patchy clay films on ped surfaces; 5 percent black concretions; some peds coated with black stains; very strongly acid; gradual, wavy boundary.

B2t—14 to 39 inches, mottled light yellowish-brown (2.5Y 6/4), light-gray (5Y 7/2), brownish-yellow (10YR 6/6), and yellowish-brown (10YR 5/6) silty clay loam; moderate, medium, subangular blocky structure; friable; few fine roots; common, thin, patchy clay films on ped surfaces; few quartz pebbles; 2 percent manganese concretions; common, fine, yellowish-red to reddish-brown concretions; very strongly acid; gradual, wavy boundary.

B3t—39 to 50 inches, mottled yellowish-brown (10YR 5/6), light-gray (2.5Y 7/2), light brownish-gray (2.5Y 6/2), and light yellowish-brown (2.5Y 6/4) loam; weak to moderate, fine, subangular blocky structure; friable; few, thin, patchy clay films on ped surfaces; 3 to 4 percent quartz pebbles; common fine concretions; very strongly acid; gradual, wavy boundary.

C—50 to 60 inches, stratified sand and gravel; saturated with water; gravel 1½ inches and less in size; extremely difficult to dig with hand tools; very strongly acid.

The solum ranges from 40 to 60 inches in thickness. Reaction is very strongly acid throughout. Mica flakes range from none to common. The A1 horizon ranges from very dark gray to gray and is 2 to 6 inches thick. The A2 or Ap horizon ranges from light brownish gray to light olive brown and in places is mottled with shades of yellow or brown. The B1t horizon ranges from yellowish brown to light brown and has common to many gray mottles. It is loam to silty clay loam. The B2t horizon is generally mottled with shades of gray, olive, brown, and yellow. It is silt loam to silty clay loam. The B3t horizon is commonly mottled with shades of gray, brown, yellow, or red. It is loam to silty clay. The C horizon has about the same color as the B3t horizon. It is variable in texture and ranges from stratified sand and gravel to loamy material.

Sylacauga soils are associated with Beason, Chenneby, Chewacla, Choccolocco, Dowellton, McQueen, Toccoa, and Wickham soils. Sylacauga soils are more poorly drained than Choccolocco, McQueen, and Wickham soils. They have less clay in the subsoil than Beason and Dowellton soils. They are better drained than Dowellton soils. They have distinct subsoil development, which Chewacla, Chenneby, and Toccoa soils do not have. They are finer textured and more poorly drained than Toccoa soils.

Sylacauga silt loam (Sy).—This is the only Sylacauga soil mapped in the county. It has the profile described as representative of the series. This soil is subject to very frequent flooding or ponding for brief periods. Slopes are 0 to 2 percent.

Included with this soil in mapping are small areas of Choccolocco, Dowellton, McQueen, and Wickham soils and a few small areas of moderately well drained soils.

This Sylacauga soil is low in natural fertility, and the organic-matter content is medium. Infiltration is medium, and permeability is slow. The available water capacity is high.

The somewhat poor drainage, flooding, and ponding water make this soil poorly suited to crops. The soil is well suited to pasture and woodland, and if drained, it is suited to cultivated crops. It is slow to warm up in spring. Erosion is not a hazard. Capability unit IIIw–14; woodland group 2w8.

Talladega Series

The Talladega series consists of shallow and moderately deep, well-drained, steep soils. These soils formed in residuum from slate and phyllite.

In a representative profile the surface layer is brown loam 3 inches thick. The subsoil, 12 inches thick, is friable, yellowish-red slaty silty clay loam. At a depth of 15 inches is hard, tilted phyllite and slate.

The acreage is all woodland. The native vegetation is mixed hardwoods and pine.

Representative profile of Talladega stony loam, 45 to 70 percent slopes, on a steep hillside 6¼ miles northeast of Talladega on Alabama Highway No. 21, 3¼ miles east on farm-to-market road to McElderry, 4 miles east to Hopeful Church, three-fourths of a mile northeast on gravel road to Salt Creek Falls, and 25 feet south of a private road, SW¼SW¼ sec. 34, T. 17 S., R. 7 E.:

A—0 to 3 inches, brown (7.5YR 4/4) loam; weak, fine, granular structure; friable; few fine and medium roots; 20 percent slate fragments; 50 to 75 percent of the surface covered with large stones; very strongly acid; clear, wavy boundary.

B1—3 to 6 inches, yellowish-red (5YR 5/8) slaty silty clay loam; weak, medium, subangular blocky structure; friable; few fine roots; 50 percent slate fragments; few, thin, patchy clay films on ped surfaces; about one-fourth volume consists of hard phyllite rock; very strongly acid; gradual, wavy boundary.

Bt—6 to 15 inches, yellowish-red (5YR 5/8) slaty silty clay loam; weak to moderate, medium, subangular blocky structure; friable; common, thin, patchy films on ped surfaces; 30 percent slate fragments; about one-third volume consists of hard phyllite rock; very strongly acid; clear, irregular boundary.

R—15 to 20 inches, hard, tilted phyllite and slate.

This soil is cyclic. At horizontal intervals of 25 feet or less, the B2t horizon has phyllite or ledges of slate. Depth to bedrock ranges from 0 to 36 inches. Reaction is very strongly acid throughout. The soil is 30 to 50 percent slate fragments. The A horizon ranges from brown to dark gray and is 1 to 4 inches thick. The B horizon ranges from yellowish brown to yellowish red. It is loam to silty clay loam. Bedrock is hard slate or phyllite.

The soil temperature is a few degrees warmer than normal for the series but this difference does not alter the usefulness or behavior of the soil.

Talladega soils are on steep hillsides with Tallapoosa and Tatum soils. They are alongside Chenneby and Chewacla soils in the narrow drains and adjacent to Masada and Wickham soils on toe slopes. Talladega soils are coarser textured and contain more coarse fragments than Tatum soils. Their subsoil is broken by ledges of bedrock, whereas the subsoil of Masada, Tallapoosa, and Wickham is not. They contain more coarse fragments than Masada, Tallapoosa, and Wickham soils. They are better drained than Chenneby and Chewacla soils.

Talladega association, very steep (TaF).—The soils in this association are on hillsides. Slopes range from 45 to 70 percent. Bluff and escarpment type areas are in this association. Rock outcrops and stones (fig. 12) cover 50 to 75 percent of the surface. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

Figure 12.—**Talladega association, very steep. More than 50 percent of the surface is covered with stones and rock outcrops.**

The Talladega soil occurs throughout the association and makes up about 85 percent of the acreage. Soils of minor extent make up the remaining 15 percent.

This is the only Talladega soil mapped in the county. It has the profile described as representative of the series. It is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is moderate.

Less extensive are the Masada, Tallapoosa, Tatum, and Wickham soils. Masada and Wickham soils are on lower slopes and toe slopes. Tallapoosa and Tatum soils are mainly on mid slopes.

The very steep slopes, very high erosion hazard, shallowness over rock, and stoniness make these soils unsuited to cultivated crops or pasture. The soils are fairly well suited to woodland, but harvesting is most difficult because of the steep slopes and rock outcrops. Tree growth is slow. Capability unit VIIe–21; woodland group 5x3.

Tallapoosa Series

The Tallapoosa series consists of shallow, well-drained, steep soils on narrow ridgetops and hillsides. These soils formed in residuum from slate.

In a representative profile the surface layer is very dark grayish-brown slaty silt loam 3 inches thick. The subsurface layer is yellowish-brown slaty silt loam about 4 inches thick. The subsoil, about 10 inches thick, is friable, yellowish-red slaty silty clay loam. At a depth of 17 inches is light olive-brown, soft, highly fractured, tilted slate.

Most of the acreage is in woodland consisting of mixed southern hardwoods and loblolly, longleaf, shortleaf, and Virginia pines.

Representative profile of Tallapoosa slaty silt loam, 25 to 45 percent slopes, on a steep hillside 3½ miles south of Talladega on Farm-market Road No. 85, three-fourths of a mile east on gravel road, and one-fourth mile south on a gravel road, SE¼NE¼ sec. 13, T. 19 S., R. 5 E.:

A1—0 to 3 inches, very dark grayish-brown (10YR 3/2) slaty silty loam; weak to moderate, fine, granular structure; friable; many fine roots; 20 percent slate fragments; very strongly acid; clear, smooth boundary.

A2—3 to 7 inches, yellowish-brown (10YR 5/4) slaty silt loam; weak to moderate, medium, granular structure; friable; many fine roots; 20 percent slate fragments; very strongly acid; clear, smooth boundary.

Bt—7 to 17 inches, yellowish-red (5YR 5/8) slaty silty clay loam; weak, medium, subangular blocky structure; friable; 45 percent soft slate fragments; few, thin, patchy clay films on most ped surfaces; very strongly acid; clear irregular boundary.

R—17 to 26 inches, light olive-brown (2.5Y 5/4), soft, highly fractured, tilted slate; can dig with hand tools; easy to break fragments with hands.

Thickness of the solum and depth to bedrock range from 12 to 18 inches. Reaction is very strongly acid throughout. The slate has varying degrees of hardness, but roots do not penetrate any of it except in cracks or fractures. The soil is more than 35 percent soft slate fragments that are easily broken by hand. The A1 horizon ranges from very dark gray to dark grayish brown and is 1 to 5 inches thick. The A2 or Ap horizon ranges from dark brown to pale brown. The Bt horizon ranges from yellowish brown to red. It is loam to silty clay loam and is slaty in places. The C horizon, where present, consists of broken and partly weathered slate fragments coated with clayey material and cracks and seams filled with silty or clayey material.

Tallapoosa soils are associated with Masada, Talladega, Tatum, and Wickham soils. They are more shallow than Masada, Tatum, and Wickham soils, which are more than 20 inches to bedrock. They have a coarser texture than Tatum soils. They have a continuous subsoil underlain by soft bedrock, whereas the subsoil of Talladega soil is broken at horizontal intervals of 25 feet or less by ledges of bedrock.

In this county, Tallapoosa soils are mapped only with Tatum soils. The Tatum soils are described under the heading "Tatum Series."

Tallapoosa-Tatum complex, 6 to 15 percent slopes (TcD).—These soils are on narrow tops and slopes of ridges. They occupy areas between Tatum slaty loam, 6 to 10 percent slopes, which is on the broader ridgetops, and the steeper Tallapoosa-Tatum association, hilly. Most of the ridgetops range from 50 to 200 feet wide and a quarter of a mile to 2 miles in length. The soils are so intricately mixed on the landscape, and areas are in such small, irregular shapes that it is impractical to separate them on the soil map.

Tallapoosa soils make up about 52 percent of the acreage, Tatum soils about 31 percent, and included soils the remaining 17 percent. Both of the dominant soils are in every delineation, but the percentage of each is somewhat variable.

The Tallapoosa soil has the profile described as representative of the Tallapoosa series. It is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is moderate, and at times during short periods of drought, plants are damaged from lack of water.

The Tatum soil has the profile similar to that described as representative of the Tatum series. It is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

Less extensive in this complex are the Chewacla, Masada, and Wickham soils. Not all of these soils are in all mapped areas.

Most of the acreage is in woodland. A few cleared areas are used for pasture.

The slope, shallowness over rock, and very high erosion hazard make these soils poorly suited to row crops. The soils are fairly well suited to pasture. They are suited to woodland, and pine trees grow well. Capability unit VIe–20; woodland group 4o1.

Tallapoosa-Tatum association, hilly (ThE).—The soils in this association are in the eastern and southern parts of the county, on hillsides, narrow ridgetops, and narrow strips in the small drainageways. They are highly dissected by a complete dendritic drainage system. The hillsides are 50 to 300 feet in length. Slopes range from 15 to 45 percent but are dominantly more than 25 percent. The ridgetops and strips in the drainageways are less than 50 feet wide. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

Tallapoosa soils make up about 65 percent of the acreage, Tatum soils about 15 percent, and soils of minor extent the remaining 20 percent. Tallapoosa and Tatum soils are on hillsides and ridgetops throughout the association.

The Tallapoosa soil has a surface layer of very dark grayish-brown slaty silt loam 3 inches thick. The next layer, 4 inches thick, is yellowish-brown slaty silt loam.

The subsoil, 10 inches thick, is yellowish-red slaty silty clay loam that is 50 to 70 percent soft slate fragments. It is underlain by strong-brown silt loam that has a platy rock structure that is more than 90 percent slate fragments. At a depth of 20 inches is tilted slate that is hard to break with hand tools. This soil is low in natural fertility and organic-matter content. Infiltration and permeability are moderate. The available water capacity is low.

The Tatum soil has a surface layer of yellowish-brown slaty loam 5 inches thick. The subsoil, 31 inches thick, is red silty clay in the upper part and yellowish-red silty clay loam mottled with brownish yellow in the lower part. At a depth of 50 inches is partly weathered, platy, tilted slate. This soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium.

Less extensive soils in this association are the Chenneby, Chewacla, Lee, Masada, Sylacauga, Talladega, Toccoa, and Wickham soils. They include soils that have a clayey subsoil less than 10 inches thick and soils that have a silty clay loam subsoil more than 10 inches thick, but less than 20 inches thick over bedrock. Masada and Wickham soils are mainly on lower slopes, benches, and toe slopes. Chenneby, Chewacla, Lee, Sylacauga, and Toccoa soils are in narrow drainageways. Talladega soils are mainly very steep and on hillsides.

On about 10 percent of the acreage, slopes are more than 45 percent. Rock outcrops and loose rock on the surface are common in most areas. In about 25 percent of the acreage of Tallapoosa soils, the subsoil is broken by ledges of bedrock within a horizontal distance of 25 feet or less, and in some places this break appears to be cyclic. In 40 percent of the acreage of these soils, the subsoil is more than 10 inches thick, and in 28 percent the combined surface layer and subsoil are more than 20 inches thick.

Also in this association, in the area east and southeast of Sylacauga, the surface layer is gravelly sandy loam 6 to 18 inches thick, and white quartz fragments of ½ inch to 3 inches in diameter are common on the surface. The slate in this area contains more sand than in other areas of the county.

On hillsides west of Sylacauga and south of Childersburg, slopes are dominantly 35 to 45 percent. In this area Tallapoosa soils make up more than 70 percent of the acreage, and Tatum soils less than 10 percent. Most of the Tatum soils are on the narrow ridgetops. The slate is hard or is stratified with hard seams in about half the area.

Nearly all the acreage of this association is in woodland. The native vegetation is mixed hardwoods and longleaf, loblolly, shortleaf, and Virginia pines.

The steep slopes, shallow soils, and very high erosion hazard make these soils unsuited to cultivated crops or pasture. The soils are suited to woodland, and pine trees grow well. Capability unit VIIe–21; woodland group 4r3.

Tatum Series

The Tatum series consists of deep and moderately deep, well-drained soils. These soils formed in residuum from slate.

In a representative profile the surface layer is yellowish-brown slaty loam 5 inches thick. The upper 19 inches of the subsoil is firm, red silty clay. The lower 12 inches is firm, red silty clay loam. The underlying material is 14 inches of friable, red silt loam that has platy rock structure. At a depth of 50 inches is soft, partly weathered slate.

About half the acreage where slopes are less than 10 percent has been cleared and is used for crops or pasture. The remaining acreage is in woodland. The native vegetation is mixed southern hardwoods and pine.

Representative profile of Tatum slaty loam, 2 to 6 percent slopes, in a pine thicket 200 feet north of Hopeful Church, SE¼NE¼ sec. 4, T. 18 S., R. 7 E.:

Ap—0 to 5 inches, yellowish-brown (10YR 5/4) slaty loam; moderate, fine, granular structure; very friable; few fine roots; strongly acid; abrupt, smooth boundary.

B2t—5 to 24 inches, red (2.5YR 4/6) silty clay; moderate to strong, fine, subangular blocky structure; firm; few fine roots; thin continuous clay films on most ped surfaces; few slate fragments; medium acid; gradual, wavy boundary.

B3t—24 to 36 inches, red (2.5YR 4/6) silty clay loam; weak, medium, subangular blocky structure; firm; thin continuous clay films on most ped surfaces; many soft slate fragments; medium acid; gradual, irregular boundary.

C—36 to 50 inches, red (2.5YR 4/6) silt loam; weak, thick, platy rock structure; friable; many soft slate fragments; medium acid; gradual, irregular boundary.

R—50 inches +, soft, partly weathered slate; difficult to dig with hand tools.

Depth to bedrock ranges from 30 to 50 inches. Reaction is strongly acid in the A horizon and medium acid in the B and C horizons. The A1 horizon ranges from very dark gray to dark grayish brown and is 2 to 6 inches thick. The A2 or Ap horizon normally ranges from brown to yellowish brown, but in eroded areas it ranges from strong brown to yellowish red. It is slaty loam and slaty silty clay loam. The B2t horizon ranges from yellowish red to red. It is silty clay loam to clay. The B2t horizon is 10 to 24 inches thick. The B3t horizon ranges from strong brown to red and in places is mottled with shades of brown and yellow. It is silt loam to silty clay loam. The C horizon ranges from red to brown and generally is mottled. It is loam or silt loam that has a platy rock structure. Bedrock is partly weathered slate that can be broken with hand tools.

Tatum soils are on the uplands in association with Masada, Talladega, Tallapoosa, and Wickham soils. They have a finer textured subsoil than any of those soils. Also, they are deeper over bedrock than Talladega and Tallapoosa soils.

Tatum slaty loam, 2 to 6 percent slopes (TmB).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas of Tallapoosa soils, a few areas where slopes are less than 2 percent, and a few shallow gullies in cultivated fields.

This Tatum soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is suited to most crops grown in the county. It is easy to work except in extremely slaty areas. It is well suited to pasture and pine trees. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–6; woodland group 4o1.

Tatum slaty loam, 6 to 10 percent slopes (TmC).—This soil has a surface layer of brown slaty loam 6 inches thick. The upper part of the subsoil, 18 inches thick, is yellowish-red silty clay. The lower part of the subsoil, 12 inches thick, is yellowish-red silty clay with brownish-yellow

mottles. It is underlain by about 6 inches of silty clay loam that is mottled in shades of red, brown, and yellow. At a depth of 42 inches is partly weathered, highly fragmented, tilted slate.

Included with this soil in mapping are small areas of Tallapoosa soils, a few small areas where slopes are 10 to 15 percent, and a few areas where the surface layer is fine sandy loam and silt loam.

This Tatum soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium.

This soil is fairly well suited to most crops grown in the county. It is easily worked and can be tilled throughout a medium range of moisture content without cloddding or crusting. It is well suited to pasture and pine trees. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–12; woodland group 4o1.

Toccoa Series

The Toccoa series consists of deep, well-drained, non acid soils on first bottoms and along small, narrow, upland drainageways. The soils formed in general alluvium washed from soils of the limestone valleys and sandstone and shale uplands.

In a representative profile the surface layer is dark grayish-brown loam 8 inches thick, and the subsurface layer is 21 inches of dark-brown loam. The subsoil is 31 inches of very friable, dark-brown silt loam. The underlying material is 12 inches of very dark grayish-brown slit loam mottled with dark gray and yellowish red.

Most of the acreage has been cleared and is used mainly for corn, soybeans, cotton, pasture, and hay. Some areas are idle, and some have been reforested with pine. Native vegetation is mixed bottom-land hardwoods and a few pine.

Representative profile of Toccoa loam, 0 to 2 percent slopes, in a soybean field three-eighths of a mile south of McElderry along Cheaha Creek, NE¼NE¼ sec. 12, T. 18 S., R. 7 E.:

Ap—0 to 8 inches, dark grayish-brown (10YR 4/2) loam; weak, fine, granular structure; very friable; many fine roots; few fine mica flakes; medium acid; gradual, smooth boundary.

A1—8 to 29 inches, dark-brown (10YR 3/3) loam; very weak, coarse, granular structure grading to massive; very friable; common fine roots; stratified with layers of silt loam material; few mica flakes; few charcoal specks; pockets of clean sand; 5 percent pebbles as much as half an inch in diameter; medium acid; gradual, wavy boundary.

B—29 to 60 inches, dark-brown (10YR 3/3) silt loam; very weak, medium, subangular blocky structure to massive; very friable; few very small slate fragments; few fine mica flakes; very strongly acid; gradual, wavy boundary.

C—60 to 72 inches, very dark grayish-brown (10YR 3/2) silt loam; common, medium, distinct, dark-gray and yellowish-red mottles; massive; friable; few charcoal specks; few fine mica flakes; partly decayed yellowish-red organic matter; very strongly acid; water table at 72 inches.

The reaction is medium acid in the A horizon and very strongly acid in the B and C horizons. The Ap horizon ranges from dark grayish brown to yellowish brown to reddish brown. The A1 and B horizons range from very dark grayish brown to light olive brown to yellowish red and from loam to fine sandy loam to silt loam. Strata of sand occur throughout the profile in places. Gray mottling is below a depth of 20 inches in places. In many profiles sand and gravel are at a depth of 4 feet or more.

Toccoa soils are associated with Chenneby, Chewacla, Choccolocco, Lee, McQueen, and Wickham soils. They are better drained than Chenneby, Chewacla, and Lee soils. They are coarser textured in the subsoil than Choccolocco, McQueen, and Wickham soils.

Toccoa loams (To).—These are the only Toccoa soils mapped in the county. They have the profile described as representative of the series. They are subject to very frequent flooding for extremely brief periods. Slopes range from 0 to 2 percent.

Included in mapping are small areas of Chenneby, Chewacla, Choccolocco, McQueen, and Wickham soils, areas where the subsurface layer is very strongly acid, and a few small areas where the surface layer is gravelly.

These Toccoa soils are medium in natural fertility and organic-matter content. Water enters and moves through the soil at a moderate rate. The available water capacity is medium.

These soils are suited to most crops grown in the county. They are well suited to intensive use. They are easy to work and can be tilled throughout a medium range of moisture content without clodding or crusting. Flooding occurs mainly late in winter and in spring, however, crops are rarely damaged. Erosion is not a hazard except where floods cause scouring. Capability unit IIw–7; woodland group 1o7.

Townley Series

The Townley series consists of moderately deep, well-drained soils. These soils formed in residuum from shale or interbedded shale and sandstone.

In a representative profile the surface layer is very dark grayish-brown gravelly loam 5 inches thick. The subsurface layer is 3 inches of yellowish-brown gravelly loam or silt loam. The upper part of the very firm subsoil is 9 inches of yellowish-red silty clay or clay; and the lower part is 7 inches of mottled light yellowish-brown, pale-brown, red, strong-brown, and light olive-brown clay. At a depth of 24 inches is tilted shale interbedded with sandstone.

About one-third of the acreage is cleared and is used mainly for pasture or hay. Some areas are idle. The native vegetation is mixed hardwoods and pine.

Representative profile of Townley gravelly loam, 15 to 45 percent slopes, on a steep, wooded hillside 1½ miles west from Russell Chapel on Shelby County Ferry road, three-fourths of a mile north on gravel road, and 50 feet east of road, NW¼SE¼ sec. 30, T. 21 S., R. 2 E.:

A1—0 to 5 inches, very dark grayish-brown (10YR 3/2) gravelly loam; weak, fine, granular structure; friable; many fine and medium roots; 15 percent sandstone and quartzite fragments; very strongly acid; clear, smooth boundary.

A2—5 to 8 inches, yellowish-brown (10YR 5/4) gravelly loam or silt loam; weak, fine, granular structure; friable; many fine and medium roots; 15 to 20 percent sandstone and shale fragments; old root channels filled with A1 material; very strongly acid; clear, smooth boundary.

B21t—8 to 17 inches, yellowish-red (5YR 5/8) silty clay or clay, red (2.5YR 4/6) when crushed; strong, fine, angular and subangular blocky structure; very firm; few fine and medium roots; 10 percent sandstone and shale fragments; many very thin clay films on ped

surfaces; very strongly acid; gradual, smooth boundary.

B22t—17 to 24 inches, mottled light yellowish-brown (10YR 6/4), pale-brown (10YR 6/3), red (2.5YR 4/6), strong-brown (7.5YR 5/6), and light olive-brown (2.5YR 5/4) clay; strong, fine, subangular and angular blocky structure; very firm; few fine roots; 8 percent small sandstone and shale fragments; common, thin, patchy clay films on most ped surfaces; very strongly acid; clear, wavy boundary.

R—24 inches +, hard tilted shale interbedded with sandstone.

Thickness of the solum and depth to bedrock range from 24 to 36 inches. Reaction is very strongly acid throughout the A and B horizons. The A1 horizon ranges from very dark gray to dark grayish brown and is 1 to 5 inches thick. The Ap or A2 horizon normally ranges from dark grayish brown to yellowish brown, but in eroded areas it ranges to yellowish red. It ranges from loam to silty clay loam and is gravelly and slaty in places. The A horizon is 2 to 10 inches thick. The B1 horizon, where present, ranges from strong brown to red. It is clay loam to silty clay loam. The B21t horizon ranges from strong brown to red. It is silty clay loam to clay. The B22t horizon is mottled with shades of brown, yellow, and olive. In places it does not have a matrix color and is mottled with shades of brown, yellow, olive, and red. Bedrock is highly weathered tilted shale and in places is interbedded with sandstone.

Townley soils are on the uplands in association with Allen, Enders, Hector, and Montevallo soils. They are shallower over bedrock than Enders soils. They are finer textured and have a thicker solum than Hector and Montevallo soils. They are finer textured and have a thinner solum than Allen soils.

Townley gravelly loam, 2 to 6 percent slopes (TrB).—The surface layer of this soil is 4 inches thick. The subsoil, about 26 inches thick, is yellowish-red silty clay in the upper part and yellowish-red silty clay mottled with brownish yellow and red in the lower part. Partly weathered shale is at a depth of 30 inches.

Included with this soil in mapping are small areas of Enders and Montevallo soils, small areas where the subsoil is yellowish-brown silty clay, and areas where the depth to bedrock is less than 20 inches.

This Townley soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is slow. The available water capacity is medium, but during short periods of drought, plants are damaged from lack of water.

This soil is suited to most crops grown in the county. It is fairly easy to work except in small areas where the clayey subsoil is exposed. The moisture range suitable for tillage is narrow. Crusts form and sometimes cause poor crop stands. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIIe–12; woodland group 4o1.

Townley gravelly loam, 6 to 10 percent slopes (TrC).—The surface layer of this soil is dark gray and 2 inches thick. The subsurface layer, 4 inches thick, is pale-brown gravelly loam. The upper part of the subsoil, 18 inches thick, is yellowish-red silty clay. The lower part, 12 inches thick, is mottled red and pale-olive silty clay. Shale bedrock is at a depth of 36 inches.

Included with this soil in mapping are small areas of Enders and Montevallo soils, small areas where the subsoil is yellowish brown and small areas where the depth to bedrock is less than 20 inches.

This Townley soil is low in natural fertility and organic-matter content. Water enters this soil readily but moves through the profile at a slow rate. The available water capacity is medium, but during short periods of drought, plants are damaged from lack of water.

This soil is fairly well suited to most crops grown locally. It is suited to pasture and pine trees. It is difficult to work, and the moisture content suitable for tillage is narrow. Crusts form and sometimes cause poor crop stands. Erosion is a moderate to high hazard in tilled areas. Capability unit IVe–16; woodland group 4o1.

Townley association, steep (TsE).—The soils in this association are in the southwestern part of the county near Talladega Springs and the ferry boat crossing to Shelby County. They are on very narrow ridgetops and short hillsides. They are underlain by shale or shale interbedded with sandstone. Slopes range from 15 to 45 percent. In a few small areas they are more than 45 percent. Rock outcrops are common on the hillsides. Most of the acreage is in woodland. The delineations of this mapping unit are larger and are more generalized and inclusive than the delineations of detailed mapping units.

Townley soils make up about 82 percent of the association, and soils of minor extent make up the remaining 18 percent. Townley soils occur throughout the association.

The Townley soil has the profile described as representative of the series. It is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is slow. The available water capacity is medium.

Of minor extent are the Allen, Enders, Hector, and Montevallo soils. Hector and Montevallo soils are mainly on upper hillsides. Allen soils are mainly on lower hillsides and toe slopes. Enders soils are mainly on middle and lower slopes and narrow ridgetops.

The native vegetation is dominantly longleaf pine. There are a few hardwood trees.

Steep slopes and the very high erosion hazard make this soil very poorly suited to cultivated crops or pasture. The soil is well suited to woodland. Operating mechanized farm equipment is difficult on hillsides and in the small isolated fields on narrow ridgetops. Capability unit VIIe–21; woodland group 4r2.

Townley-Tatum complex, 6 to 10 percent slopes, eroded (TtC2).—These soils are on narrow eroded ridgetops, hillsides, and toe slopes. They are so intricately mixed on the landscape, and areas are in such small irregular shapes that it is impractical to show them separately on the soil map.

About 54 percent of the acreage is Townley soils, and 36 percent of the acreage is Tatum soils. The remaining 10 percent is made up of less extensive soils. Each delineation contains the two dominant soils, but the percentage of each is variable. The percentage of Townley soils ranges from 40 to 65 percent, Tatum soils 25 to 50 percent, and less extensive soils 5 to 20 percent.

The Townley soil has a surface layer of yellowish-red slaty silty clay loam 2 inches thick. The subsoil, 25 inches thick, is red heavy silty clay loam in the upper part and yellowish-red silt loam mottled with brownish yellow in the lower part. The underlying material is yellowish-red silt loam that has a platy rock structure. At a depth of 35 inches is soft, platy, red slate. This soil is low in natural fertility and organic-matter content. Infiltration and permeability are slow. The available

water capacity is medium, but during short periods of drought, plants are damaged from lack of water.

The Tatum soil has a surface layer of brown slaty silty clay loam 2 inches thick and a subsurface layer of mixed brown and yellowish-red silty clay loam 3 inches thick. The upper part of the subsoil, 21 inches thick, is yellowish-red clay mottled with brownish yellow in the lower part. The lower part of the subsoil, 19 inches thick, is yellowish-red silt loam that contains many soft slate fragments. Bedrock is soft, partly weathered slate. This soil is low in natural fertility and organic-matter content. Infiltration is slow, and permeability is moderate. The available water capacity is medium.

Less extensive are the Masada, Tallapoosa, and Wickham soils. Not all occur in each mapped area.

All the acreage has been cleared and cropped, but most of its has reverted to loblolly pine. A few areas are used for pasture. Gullies and old terrace remnants are common in the complex. In some areas slate is exposed as a result of soil erosion. In 25 to 35 percent of the acreage, slopes are 10 to 15 percent.

The high erosion hazard and the shallowness of the soils make them poorly suited to cultivated crops. The soils are fairly well suited to pasture and are well suited to woodland. They are difficult to work and can be tilled only within a narrow range of moisture content without clodding or crusting. It is difficult to prepare a suitable seedbed, and the risk of a poor crop stand is high. Capability unit VIe–20; woodland group 4o1.

Urban Land

Urban land is reworked and compacted material that ranges from yellowish-brown to dark-red cherty clay loam to clay. Soil horizons can no longer be identified. In many places cuts have been made exposing the underlying material. The color of the underlying material ranges from dark red to mottled red, brown, and yellow. The texture is ordinarily clay or cherty clay. Rock is seldom exposed in cuts.

This reworked material is normally strongly acid. It is low in natural fertility and organic-matter content. Infiltration and permeability are slow where the soil is exposed, because of compaction when cutting or filling the areas. The available water supply is low.

In Talladega County, Urban land is mapped only with Decatur soils.

Urban land-Decatur complex (Ud).—The soils in this mapping unit are level to gently sloping. They are in areas that have been graded and filled to prepare them for industrial sites and residential areas. In most areas soil profiles can no longer be identified. The material ranges from cherty clay loam to clay. In many places deep cuts have been made, but rock is seldom exposed. Slopes range from 0 to 5 percent. Most of the areas are in the vicinity of Talladega, Sylacauga, and Childersburg, but a number of small areas occur throughout the county, mainly in the limestone valley section. The soils are intricately mixed on the landscape, and areas are in such small irregular shapes that it is impractical to show the Decatur soils and Urban land separately on the soil map.

Urban land makes up about 65 percent of the acreage, and Decatur soils about 25 percent. The remaining 10 percent are the Anniston, Dewey, Fullerton, and Lobelville soils, which occur throughout the complex.

The Decatur soil has a surface layer of dark reddish-brown silty clay loam and a subsoil of dark-red clay several feet thick. In many areas the natural surface layer was removed during leveling, and the surface layer is now dark-red clay. This soil is mainly in undisturbed areas. It is low in natural fertility and organic-matter content. Infiltration is slow, and permeability is moderate. The available water capacity is medium.

For lawns and landscaping, topsoil must be added and large amounts of fertilizer applied. Erosion is a hazard where the soil is bare. Capability unit and woodland group are not assigned.

Wickham Series

The Wickham series consists of deep, well-drained soils. These soils formed in alluvial and colluvial material on stream terraces and toe slopes. The areas on low stream terraces are subject to frequent overflow of extremely brief duration.

In a representative profile the surface layer is brown fine sandy loam 8 inches thick. The subsoil, about 52 inches thick, is friable, yellowish-red fine sandy clay loam in the uppermost 22 inches; friable, yellowish-red sandy clay loam in the next 12 inches; very friable, yellowish-red fine sandy loam in the next 12 inches; and very friable, strong-brown sandy loam in the lowermost 6 inches. Below this is dark-brown sand or loamy sand 12 inches thick.

About 75 percent of the acreage has been cleared and is used for crops or pasture, or is idle. The native vegetation is mixed hardwoods and pine. Nearly all the areas on stream terraces are cleared and are used for crops or pasture.

Representative profile of Wickham fine sandy loam, terrace, 0 to 2 percent slopes, in a cultivated field 0.6 mile south of the confluence of Cheaha and Choccolocco Creeks, NW¼NE¼ sec. 19, T. 17 S., R. 6 E.:

Ap—0 to 8 inches, brown (7.5YR 4/4) fine sandy loam; weak, fine, granular structure; very friable; many fine roots; few fine mica flakes; medium acid; abrupt, smooth boundary.

B21t—8 to 30 inches, yellowish-red (5YR 4/8) fine sandy clay loam; moderate, fine, subangular blocky structure; friable; few fine roots; common, very thin, patchy clay films on ped surfaces; few very fine mica flakes; strongly acid; gradual, wavy boundary.

B22t—30 to 42 inches, yellowish-red (5YR 5/6) sandy clay loam; weak to moderate, fine, subangular blocky structure; friable; few fine roots; common, very thin, patchy clay films on ped surfaces; few very fine mica flakes; strongly acid; gradual, wavy boundary.

B23t—42 to 54 inches, yellowish-red (5YR 5/8) sandy loam; weak, fine and medium, subangular blocky structure; very friable; few, thin, patchy clay films on ped surfaces; sand grains coated and bridged with clay; few very fine mica flakes; very strongly acid; gradual, wavy boundary.

B3—54 to 60 inches, strong-brown (7.5YR 5/6) sandy loam; weak, coarse, subangular blocky structure; very friable; few very thin mica flakes; very strongly acid; gradual, wavy boundary.

C—60 to 72 inches, dark-brown (7.5YR 4/4) sand or loamy sand; single grain; very friable; very strongly acid.

The solum ranges from 36 to more than 60 inches in thickness. Depth to bedrock is 3 to 6 feet or more. The reaction

of the A horizon is medium acid; that of the B horizon is strongly acid to a depth of 42 inches, below which it is very strongly acid. Mica flakes range from few to common throughout the profile. The A1 horizon ranges from very dark gray to dark grayish brown. The A2 or Ap horizon ranges from brown to reddish brown. It is fine sandy loam to slaty loam. The B2t horizon ranges from yellowish red to red. It is dominantly sandy clay loam but ranges from loam to slaty silty clay loam. In places the lower part of the B2t horizon is mottled with shades of yellow and brown. The B3 horizon ranges from yellowish brown to yellowish red and in places is mottled with shades of brown, yellow, or olive. It ranges from sandy loam to silty clay loam. The C horizon has about the same color range as the B3 horizon. It ranges from stratified sandy and clayey material to sand or loamy sand.

Wickham soils are associated with Chenneby, Chewacla, Choccolocco, Leadvale, Masada, McQueen, Sylacauga, Tallapoosa, Tatum, and Toccoa soils. They are better drained and are coarser textured in the subsoil than Sylacauga soils. They do not have a fragipan as do Leadvale soils. They have a well-developed subsoil and are better drained than Chenneby and Chewacla soils. They have finer textures and more distinct horizonation than Toccoa soils. They have a redder, coarser textured subsoil than Choccolocco soils. They are coarser textured than McQueen and Tatum soils. Their subsoil is redder than that of Masada. They have a thicker solum than Tallapoosa soils.

Wickham fine sandy loam, terrace, 0 to 2 percent slopes (WcA).—This soil has the profile described as representative of the series.

Included with this soil in mapping are small areas of Choccolocco, McQueen, and Sylacauga soils and a few small areas of soils that have a sandy loam texture in the upper subsoil.

This Wickham soil is low in natural fertility and organic-matter content. Water enters this soil readily and moves through the profile at a moderate rate. The available water capacity is medium.

This soil is well suited to all crops commonly grown in the county. It is easy to work and can be tilled throughout a wide range of moisture content without clods or crusts forming. Erosion is not a hazard. Capability unit I–1; woodland group 3o7.

Wickham fine sandy loam, terrace, 2 to 6 percent slopes (WcB).—This soil is subject to frequent flooding for extremely brief periods mainly late in winter and in spring, but crops are seldom damaged. The surface layer is reddish-brown fine sandy loam 4 inches thick. The upper part of the subsoil, about 40 inches thick, is yellowish-red sandy clay loam or clay loam. The lower part, about 18 inches thick, is yellowish-red sandy clay loam.

Included with this soil in mapping are small areas of Choccolocco, McQueen, and Sylacauga soils and small areas where slopes are less than 2 percent.

This Wickham soil is low in natural fertility and organic-matter content. Water enters this soil readily and moves through it at a moderate rate. The available water capacity is medium.

This soil is well suited to all crops commonly grown in the county. It is well suited to pasture and woodland. It is easy to work and can be tilled throughout a wide range of moisture content without clods or crusts forming. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–3; woodland group 3o7.

Wickham slaty loam, 2 to 6 percent slopes (WkB).—This soil has a surface layer of brown slaty loam 6 inches thick. The upper part of the subsoil, about 18 inches thick, is yellowish-red slaty silty clay loam and clay loam. The lower part, about 36 inches thick, is yellowish-red slaty silty clay loam mottled with brownish yellow and yellowish brown. Depth to bedrock is more than 6 feet.

Included with this soil in mapping are small areas of Chewacla, Masada, Tallapoosa, and Tatum soils.

This Wickham soil is low in natural fertility and organic-matter content. Water enters the soil readily and moves through it at a moderate rate. The available water capacity is medium, but during short periods of drought, plants are damaged from lack of water.

This soil is well suited to all crops commonly grown in the county. It is fairly easy to work and can be tilled throughout a wide range of moisture content without clodding or crusting. In places the slate fragments on the surface interfere with tillage. Erosion is a slight to moderate hazard in tilled areas. Capability unit IIe–3; woodland group 3o7.

Wickham slaty loam, 6 to 10 percent slopes (WkC).—This soil has a surface layer of brown slaty loam 5 inches thick. The upper part of the subsoil, about 30 inches thick, is yellowish-red slaty silty clay loam or silt loam. The lower part, more than 2 feet thick, is mottled yellowish-red, strong-brown, and yellowish-brown gravelly silty clay loam.

Included with this soil in mapping are small areas of Masada, Tallapoosa, and Tatum soils, small areas where slopes are 10 to 15 percent, and areas where the surface layer is silt loam.

This Wickham soil is low in natural fertility and organic-matter content. Infiltration is medium, and permeability is moderate. The available water capacity is medium, but during short periods of drought, crops are damaged from lack of water.

This soil is suited to most crops grown in the county. It is fairly easy to work and can be tilled throughout a wide range of moisture content without clodding or crusting. In places the slate fragments on the surface interfere with tillage. Erosion is a moderate hazard in tilled areas. Capability unit IIIe–10; woodland group 3o7.

Use of the Soils for Crops and Pasture [2]

This section is a guide to the management of soils in Talladega County. It does not suggest specific management for individual soils, however, or give detailed information about managing the soils. For more detailed information about management, consult a local representative of the Soil Conservation Service, the Extension Service, or the Agricultural Experiment Station.

The following pages suggest general management practices that are applicable to the soils of this county. They also explain the capability classification system used by the Soil Conservation Service and describe use and management of the soils by capability units. Estimated yields of specified crops for each soil in the county are listed in table 2.

[2] LEWIS D. WILLIAMS, conservation agronomist, helped prepare this section.

General Management Practices

The amount of lime and fertilizer needed to grow a particular crop depends on how the soil was fertilized and managed in past years. Lime and fertilizer requirements should always be determined by soil testing.

The frequent use of heavy farm machinery has resulted in compacted layers in the upper part of the subsoil in many fields that have been intensively used for row crops. These compacted layers, usually referred to as "plowpans" or "trafficpans," restrict root development of plants and retard the movement of soil water. These conditions result in reduced crop yields. Chiseling, subsoiling, and deep plowing have been used to give temporary relief to this limitation. Minimum tillage (fig. 13) is most effective in preventing the formation of compacted layers and is also effective in reducing soil erosion and loss of rainwater through runoff.

The management needed for pasture and hayland includes proper grazing or cutting heights, weed control, proper fertilization, and rotational grazing. Cool-season perennial grasses, such as tall fescue and orchardgrass, should not be grazed in summer. Overgrazing and low fertilization result in weak plants and poor stands that are quickly infested with weeds. The best way to prevent weeds from becoming established is to keep a good, dense ground cover of the desired pasture species.

If more detailed information is needed for a particular soil, refer to the section "Descriptions of the Soils."

For the kinds of crops commonly grown in Talladega County, refer to table 2.

Capability Grouping

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The

Figure 13.—Corn planted in bahiagrass sod. The soil is Decatur loam, 0 to 2 percent slopes.

groups are made according to the limitations of the soils when used for field crops, the risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for range, for forest trees, or for engineering.

In the capability system, the kinds of soil are grouped at three levels, the capability class, the subclass, and the unit. These levels are described in the following paragraphs.

CAPABILITY CLASSES, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture or range, woodland, or wildlife habitat. (None in Talladega County.)

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.

Class VIII soils and landforms have limitations that preclude their use for commercial crop production and restrict their use to recreation, wildlife habitat, or water supply, or to esthetic purposes. (None in Talladega County.)

CAPABILITY SUBCLASSES are soil groups within one class; they are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, IIe. The letter *e* shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is too cold or too dry.

In class I there are no subclasses, because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by *w*, *s*, and *c*, because the soils in class V are subject to little or no erosion, though they have other limitations that restrict their use largely to pasture, range, woodland, wildlife, or recreation.

CAPABILITY UNITS are soil groups within the subclasses. The soils in one capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity and other responses to management. Thus, the capability unit is a convenient grouping for making many statements about management of soils. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, IIe–4 or IIe–6. Thus, in one symbol, the Roman numeral designates the capability class, or degree of limitation; the small letter indicates the subclass, or kind of limitation, as defined in the foregoing paragraph; and the Arabic numeral specifically identifies the capability unit within each subclass.

In the following pages the capability units in Talladega County are described and suggestions for the use and management of the soils are given.

Management by capability units

In this section the soils of this county that require about the same kind of management are grouped in capability units. The significant features of the soils in each capability unit, together with their hazards and limitations, are described, and suggestions for use and management of the soils of each unit are given.

CAPABILITY UNIT I–1

This unit consists of deep, well-drained, friable, loamy soils on low stream terraces. Slopes are 0 to 2 percent.

These soils are well suited to all the commonly grown row crops and hay and pasture plants. They are subject to brief periods of flooding, mainly late in winter and early in spring, but crops are seldom damaged. The response to fertilizer and lime is good.

Cultivated crops can be grown each year if the fertility level is maintained and crop residue is returned to the soil. Cover crops are needed if low-residue field crops are grown. Row arrangements and land smoothing are needed in some fields to help remove surplus surface water.

These soils can be tilled throughout a medium to wide range of moisture content. They are easy to keep in good tilth. They are well suited to irrigation.

CAPABILITY UNIT I–2

This unit consists of deep, well-drained, loamy and clayey soils on broad, smooth uplands, in slight depressions of the uplands, along small drainageways, or on low stream terraces. Slopes are 0 to 2 percent.

These soils are well suited to the commonly grown row crops and pasture and hay crops. Crops respond

well to fertilization. Some areas are subject to frequent extremely brief periods of flooding, but crops are seldom damaged.

Cultivated crops can be grown each year. Crop residue should be kept on the soil surface between the time of harvest and the time the seedbed is prepared for the next crop (fig. 14). Cover crops should be planted for winter cover and green manure when silage and other low-residue crops are grown. Row arrangement and shallow field ditches are needed to remove surface water in some places.

The soils in this unit can be tilled throughout a medium range of moisture content, and good tilth is easy to maintain. These soils are well suited to irrigation.

CAPABILITY UNIT IIe-3

This unit consists of deep, well-drained, friable, loamy soils on uplands, toe slopes, and stream terraces. Slopes are 2 to 8 percent.

These soils are suited to all commonly grown row crops, hay crops, and pasture plants. A few low-lying areas are subject to frequent, extremely brief periods of flooding, mainly late in winter and in spring. Crop response to lime and fertilizer is good.

Cropping systems should be used that include the use of close-growing crops about half the time. An example of an adequate cropping system is 2 years of row crops and 2 years of close-growing sod crops. When the soils are used for row crops, erosion control practices are needed, including terraces or stripcropping, contour farming, grassed waterways, and management of crop residue.

These soils can be tilled throughout a wide range of moisture content. They are easy to keep in good tilth if erosion is controlled and crop residue is returned to the soil. Chert and gravel in the surface layer in some areas interfere slightly with tillage. The soils are moderately well suited to irrigation.

Figure 14.—**Crop residue management on Grasmere silty clay.**

CAPABILITY UNIT IIe-4

This unit consists of deep, well-drained, friable to firm, loamy soils that have a clayey subsoil. These soils are on uplands and stream terraces. Slopes are 2 to 6 percent.

These soils are well suited to all commonly grown row and sod crops. A few low-lying areas are subject to extremely brief periods of flooding, mainly late in winter and in spring. Crop response to lime and fertilizer is good.

In a good cropping system, close-growing crops are grown about half the time. An example is 2 years of row crops and 2 years of sod crops. Conservation practices needed to control erosion on cultivated fields are terraces or stripcropping, grassed waterways (fig. 15), contour farming, and management of crop residue. If low-residue crops are grown, a cover crop should be planted between successive row crops.

These soils can be tilled throughout a medium to wide range of moisture content. They are fairly easy to keep in good tilth. They are well suited to irrigation.

CAPABILITY UNIT IIe-5

This unit consists of moderately well drained, friable, loamy soils that have a fragipan in the lower subsoil. Slopes are 2 to 6 percent.

These soils are fairly well suited to corn, cotton, soybeans, and small grain. They are well suited to pasture and hay crops, including tall fescue, bahiagrass, bermudagrass, sericea, and clovers. Alfalfa and johnsongrass can be grown, but the life of stands is usually short. The chert fragments on the surface interfere with tillage in some areas. Crop response to lime and fertilizer is medium to good.

In a good cropping system, perennial sod crops are grown 50 to 75 percent of the time. If these soils are

Figure 15.—A waterway planted in fescuegrass and white clover on Decatur silt loam, 2 to 6 percent slopes. Grassed waterways are essential to a good water disposal system.

used for row crops for more than 1 year in succession, terraces or stripcropping, grassed waterways, contour farming, and crop residue management are needed to control erosion. Because the fragipan restricts the root system, precautions should be taken to prevent loss of topsoil by erosion.

These soils can be tilled throughout a fairly wide range of moisture content. Tillage is sometimes slightly delayed in spring. Because the root system is restricted, crops are damaged quickly in dry weather. These soils are moderately well suited to irrigation.

CAPABILITY UNIT IIe-6

Tatum slaty loam, 2 to 6 percent slopes, is the only soil in this capability unit. It is a moderately deep to deep, well-drained loamy soil that has a firm clayey subsoil. This soil is on uplands. Slopes are 2 to 6 percent.

This soil is suited to most commonly grown row crops and pasture and hay plants. Crop response to lime and fertilizer is good.

Close-growing crops should be grown at least half the time. Terraces or stripcropping, grassed waterways, contour farming, and crop residue management are needed to control erosion in fields that are used for row crops.

This soil can be tilled within only a narrow range of moisture content. In places slate fragments slightly interfere with tillage.

CAPABILITY UNIT IIw-7

This unit consists of deep, well drained and moderately well drained, loamy soils in narrow bottoms. Slopes are 0 to 2 percent.

These soils are well suited to corn, soybeans, and sorghum. They are only moderately well suited to cotton, small grain, and most vegetable crops. They are well suited to most pasture and hay crops. They are subject to very frequent, extremely brief flooding, mainly late in winter and early in spring. Medium to high rates of lime and fertilizer are needed for good crop response.

Cultivated crops can be grown each year. Shallow field ditches and land smoothing are needed in some fields to remove surface water.

These soils can be tilled throughout a moderately wide range of moisture content, and good tilth is easy to maintain. Tillage is delayed for short periods during wet seasons. These soils are well suited to irrigation.

CAPABILITY UNIT IIw-8

This unit consists of deep, moderately well drained, friable, loamy soils that have a fragipan in the lower part of the subsoil. Slopes are 0 to 2 percent.

These soils are well suited to soybeans, sorghum, small grain, and pasture and hay plants. They are fairly well suited to corn, cotton, and some vegetable crops. Some low areas are subject to infrequent, very brief periods of flooding, but crops are seldom damaged. Crop response to lime and fertilizer is moderate to good.

Cultivated crops can be grown each year. All crop residue should be returned to the soil to help maintain tilth and the organic-matter content. Shallow field ditches and row arrangement are needed in some fields to remove surface water.

These soils can be tilled throughout a medium range of soil moisture content. They are easy to keep in good tilth. The fragipan in the subsoil restricts the root systems of most plants. This condition cannot be overcome by tillage practices. At times tillage is slightly delayed during wet seasons. Most plants are damaged quickly during dry weather. These soils are well suited to irrigation.

CAPABILITY UNIT IIs-9

Bodine cherty silt loam, 2 to 6 percent slopes, is the only soil in this unit. It is a deep, well-drained, gently sloping soil on uplands. Slopes are 2 to 6 percent.

Most of the locally grown crops grow fairly well on this soil. Hay and pasture plants that grow during the cool seasons and the deep-rooted, drought-resistant, warm-season plants are fairly well suited. Also, tall fescue, sericea, and bahiagrass are suited. Tall fescue should not be grazed during the summer. Crop response to fertilization is poor.

Sod crops should be grown at least half the time. Terraces, contour farming, grassed waterways, and crop residue management are needed on cultivated fields to reduce runoff and control erosion.

This soil can be tilled throughout a wide range of moisture content. Chert fragments interfere with most farming operations. Most crops are damaged very quickly during dry weather because of the low available water capacity. This limitation cannot be overcome by management. This soil is poorly suited to irrigation.

CAPABILITY UNIT IIIe-10

This unit consists of deep, well-drained, loamy soils on uplands, foot slopes, and high stream terraces. Slopes are dominantly 6 to 10 percent. Depth to rock is 3 to 5 feet in about 10 percent of the area.

These soils are suited to all commonly grown crops in the county.

Close growing crops should be grown about three-fourths of the time. Cultivated crops should not be grown more than 2 years in succession. Terraces or stripcropping, contour farming, grassed waterways, and crop residue management are needed for erosion control if these soils are used for row crops.

These soils can be tilled throughout a wide range of moisture content. Good tilth is difficult to maintain.

CAPABILITY UNIT IIIe-11

This unit consists of deep, well-drained, loamy soils that have a firm, clayey subsoil. These soils are on uplands. Slopes are 6 to 15 percent.

These soils are suited to all locally grown crops. Crop response to lime and fertilizer is good.

The cropping systems should include the use of perennial sod about 75 percent of the time. Terraces or stripcropping, grassed waterways, contour farming, and crop residue management are needed for erosion control if these soils are used for row crops.

These soils can be tilled throughout a moderately wide range of moisture content. Chert fragments interfere with tillage in some areas.

CAPABILITY UNIT IIIe-12

This unit consists of moderately deep and deep, well-drained, loamy soils that have a clayey subsoil. These soils are on uplands. Slopes are 6 to 10 percent.

These soils are fairly well suited to corn, cotton, small grain, and pasture and hay plants.

These soils should not be row cropped more than 1 year out of 5.

CAPABILITY UNIT IIIe-13

This unit consists of eroded, deep, well-drained, loamy soils that have a loamy and clayey subsoil. These soils are on uplands. Slopes are 2 to 10 percent.

These soils are suited to all locally grown row crops and pasture and hay plants. Crop response to lime and fertilizer is good.

Cropping systems should include the use of perennial sod plants at least half the time. Terraces or stripcropping, grassed waterways, contour farming, and crop residue management are needed for erosion control when row crops are grown.

These soils can be tilled within only a narrow range of moisture content. Tillage in wet soil results in cloddy seedbeds, and good stands are difficult to obtain. Erosion must be controlled to maintain good tilth. Plants are damaged rather quickly in dry weather.

CAPABILITY UNIT IIIw-14

This unit consists of deep, somewhat poorly drained, loamy soils that have a loamy and clayey subsoil. These soils are on low stream terraces and upland flats. Slopes are 0 to 2 percent.

Very frequent flooding and ponding of brief duration are hazards.

These soils are suited to soybeans and sorghum. Corn can be grown if a good drainage system is installed. Tall fescue and bahiagrass are suitable pasture plants. Crop response to fertilization is moderate.

These soils can be row cropped each year. Field ditches are needed to remove excess water. Bedding is needed in some fields.

These soils can be tilled throughout a wide range of moisture content. Seedbed preparation is usually delayed in the spring because of ponding and a perched water table. The ponding can be reduced on some fields by water management practices, but the high water table during wet seasons cannot be significantly overcome by management.

CAPABILITY UNIT IIIw-15

Chewacla and Chenneby are the only soils in this capability unit. They are deep, somewhat poorly drained, loamy soils on first bottoms. Slopes are 0 to 2 percent.

Very frequent flooding of very brief duration (fig. 16) is a hazard.

These soils are suited to corn, sorghum, and soybeans. They are poorly suited to cotton and small grain. They are well suited to tall fescue, bermudagrass, and bahiagrass. Crop response to lime and fertilizer is moderate.

Cultivated crops can be grown each year. Drainage is needed.

Figure 16.—**Flooding on Chewacla and Chenneby soils. Crops are damaged mainly late in winter and in spring.**

These soils can be tilled throughout a wide range of moisture content, and good tilth is easy to maintain. Tillage is usually delayed in spring.

CAPABILITY UNIT IVe–16

This unit consists of moderately deep and deep, well-drained, loamy soils that have a loamy and clayey subsoil. These soils are on uplands. Slopes are 6 to 15 percent.

Cotton, soybeans, and small grain can be grown, and all locally grown pasture and hay plants are suited. Crop response to fertilizer is good.

Perennial grasses should be grown at least 75 percent of the time. Slopes of more than 10 percent should only be row cropped 1 years out of 5. Erosion is difficult to control. Practices such as terraces or stripcropping, contour farming, grassed waterways, and crop residue management are needed on fields that are planned for row crops.

These soils can be tilled within only a narrow range of moisture content. Chert and gravel are a moderate hazard to tillage in some areas.

CAPABILITY UNIT IVw–17

This unit consists of deep, poorly drained, loamy soils that have a loamy or clayey subsoil. These soils are on low stream terraces, upland flats, and first bottoms. Slopes are 0 to 2 percent.

These soils are subject to very frequent flooding or ponding of brief duration.

If the soils are artificially drained, corn, sorghum, and soybeans can be grown. Cotton and small grain are not suited. Tall fescue and bahiagrass are suitable pasture plants.

Row crops can be grown each year without damage to these soils. Drainage is needed to remove surface and subsurface water. Bedding is helpful in some fields.

These soils can be tilled throughout a wide range of moisture content. Seedbed preparation is delayed in the spring. These soils have restricted layers in the subsoil that reduce the size of root systems. Plants are damaged quickly in wet and dry periods. The restricted layer in the subsoil cannot be overcome by management.

CAPABILITY UNIT IVs–18

This unit consists of shallow and deep, well-drained, loamy, gently sloping to moderately steep soils on uplands. Slopes are 0 to 15 percent.

Many commonly grown plants are suited to these soils, but the large number of rock fragments on the surface restricts their use for crops. These soils are extremely difficult to work with modern farm equipment.

Most pasture plants can be grown, but some areas are not well suited to hay because of the rock fragments.

CAPABILITY UNIT VIe–19

Only Minvale-Bodine association, hilly, is in this capability unit. These are deep, well-drained, loamy, steep soils on hillsides. Slopes are 10 to 35 percent.

Chert fragments on the surface interfere with tillage in most areas.

These soils are not suited to cultivated crops in planned cropping systems. They can occasionally be used for 1 year of row crops between sod crops.

Tall fescue, bahiagrass, sericea, and bermudagrass are suited if good management is applied.

CAPABILITY UNIT VIe–20

This unit consists of shallow to deep, well-drained, loamy soils that have a loamy and clayey subsoil. These soils are on uplands. Slopes are 6 to 15 percent. The depth to rock ranges from 10 to 50 inches.

These soils are not suited to cultivated crops. If well managed, they are fairly well suited to pasture and hay plants, such as tall fescue, sericea, bahiagrass, and bermudagrass.

CAPABILITY UNIT VIIe–21

This unit consists of shallow to deep, well-drained, steep loamy soils that have a loamy and clayey subsoil. These soils are on hillsides. Slopes are 15 to 45 percent.

These soils are too stony and steep for cropland, pasture, and hay crops. They are suited to woodland.

CAPABILITY UNIT VIIe–22

This unit consists of deep, well-drained, loamy, steep soils that have a loamy and clayey subsoil. These soils are on uplands. Slopes are 10 to 50 percent. Depth to rock is more than 6 feet.

These soils are suited to woodland. They are too steep and too eroded for cropland. Some areas are suitable for pasture after shaping to smooth out the gullies.

CAPABILITY UNIT VIIs–23

This unit consists of shallow and moderately steep, well-drained, loamy, steep, rocky soils that have a loamy and clayey subsoil. These soils are on uplands. Slopes range from 15 to 50 percent.

Many of these areas are extremely stony or rocky. As much as 90 percent of the surface is covered with rocks, the size of which ranges from a few feet to several feet in diameter.

These soils are not suited to cropland, pasture, or hayland. Some areas are suited to woodland, but because of steep slopes and rockiness, harvesting is difficult.

Estimated Yields

The estimated average yields per acre of the principal crops grown in Talladega County are shown in table 2. The estimates are based on yields obtained in long-term experiments, yields of crops harvested on local farms, and estimates by agricultural workers who have had much experience with the crops and soils in this county. All estimates are based on an average amount of rainfall in the area over a long period of time without irrigation. The yields are those that can be expected under a high level of management.

Under high level management—

1. Fertilizer and lime are added according to the needs indicated by soil tests.
2. Cropping systems suggested in the capability units are followed.
3. Water is used or is disposed of by terraces, grassed waterways, field borders, contour cultivation, or artificial drainage.

TABLE 2.—*Estimated average yields per acre of principal crops under high level management*

[Absence of figures indicates crop is not commonly grown or is not suited to the soil specified]

Soil	Corn	Cotton	Soybeans	Wheat	Hay		Pasture		
					Coastal bermudagrass	Johnsongrass	Fescue and legumes	Bahiagrass and legumes	Coastal bermudagrass
	Bu.	*Lb.*	*Bu.*	*Bu.*	*Tons*	*Tons*	*Days/acre* [1]	*Days/acre* [1]	*Days/acre* [1]
Allen cobbly fine sandy loam, 2 to 10 percent slopes									
Allen gravelly fine sandy loam, 2 to 6 percent slopes	80	775	25	35	6.0	3.0	210	240	240
Allen gravelly fine sandy loam, 6 to 10 percent slopes	70	625	25	35	6.0	2.0	175	200	200
Allen gravelly fine sandy loam, 10 to 15 percent slopes	50			25	4.0	1.25	140	160	160
Allen gravelly sandy clay loam, 2 to 6 percent slopes, eroded	60	550	20	30	4.5	1.50	155	180	180
Allen gravelly sandy clay loam, 6 to 15 percent slopes, eroded				20	4.0	1.0	140	160	160
Allen association, steep									
Anniston loam, 2 to 6 percent slopes	85	850	30	35	6.0	3.0	210	240	240
Anniston loam, 6 to 15 percent slopes	65	650	20	30	5.0	2.5	190	220	220
Beason silt loam			20				170	160	
Bodine cherty silt loam, 2 to 6 percent slopes					4.0		150	180	180
Bodine cherty silt loam, 6 to 15 percent slopes					3.0		140	160	160
Bodine stony loam, 15 to 45 percent slopes									
Bremo slaty silt loam, 0 to 12 percent slopes									
Cane fine sandy loam, 2 to 6 percent slopes	60	700	25	27	5.0		170	225	225
Chewacla and Chenneby soils	90		30		5.5		200	220	220
Choccolocco silt loam	90	850	38	35	6.0	4.5	200	240	240
Clymer stony loam									
Decatur loam, 0 to 2 percent slopes	85	900	35	40	5.5	4.5	210	230	230
Decatur silt loam, 2 to 6 percent slopes	80	850	30	35	5.5	4.5	210	230	230
Decatur silty clay loam, 4 to 10 percent slopes, eroded	45	450		20	3.5	2.5	145	160	160
Decatur silty clay loam, 10 to 25 percent slopes, severely eroded					3.0	2.0	130	140	140
Dewey loam, 2 to 6 percent slopes	75	800	30	35	5.5	4.5	210	230	230
Dewey clay loam, 2 to 6 percent slopes, eroded	70	750	25	30	5.0	4.0	205	225	225
Dewey clay loam, 6 to 10 percent slopes, eroded	60	500	20	20	4.0	3.0	175	180	180
Dewey clay loam, 10 to 25 percent slopes, severely eroded					3.0	2.0	140	150	150
Dowellton silt loam			20				160	180	
Enders-Montevallo association, steep									
Enders-Townley-Montevallo complex, 6 to 15 percent slopes							120	150	150
Fullerton cherty silt loam, 2 to 6 percent slopes	65	675	25	30	5.0	3.0	180	210	210
Fullerton cherty silt loam, 6 to 10 percent slopes	55	550	22	25	4.5	2.5	160	190	190
Fullerton cherty silty clay loam, 6 to 15 percent slopes, eroded				20	3.5	1.5	140	160	160
Grasmere silty clay	110	1,000	35	40	6.0	5.0	230	250	250
Guthrie silt loam			20				160	180	
Holston fine sandy loam, 2 to 6 percent slopes	85	800	25	35	6.0	3.0	210	240	240
Holston gravelly fine sandy loam, 6 to 15 percent slopes	60	525	18	28	4.5	1.5	155	180	180
Leadvale silt loam	65	675	28	27	5.0	2.0	180	225	225
Lee silt loam	50		22				160	180	
Lobelville loam	65	700	25		4.0		200	210	210
Locust silt loam, 0 to 2 percent slopes	65	650	30	30	5.0		170	225	225
Locust silt loam, 2 to 6 percent slopes	60	700	25	27	5.0		170	225	225
Locust cherty silt loam, 2 to 6 percent slopes	50	500		22	3.5		150	180	180
Masada slaty loam, 2 to 8 percent slopes	60	700		25	5.0		170	220	220
McQueen silt loam, 0 to 2 percent slopes	90	850	38	35	6.0	4.5	200	240	240
McQueen silt loam, 2 to 6 percent slopes	80	800	35	33	5.5	4.0	200	240	240
Melvin silt loam	50		22				160	180	
Minvale cherty silt loam, 2 to 6 percent slopes	65	600	20	32	5.0	3.0	190	200	200

See footnote at end of table.

TABLE 2.—*Estimated average yields per acre of principal crops under high level management*—Continued

Soil	Corn	Cotton	Soybeans	Wheat	Hay		Pasture		
					Coastal bermudagrass	Johnsongrass	Fescue and legumes	Bahiagrass and legumes	Coastal bermudagrass
	Bu.	*Lb.*	*Bu.*	*Bu.*	*Tons*	*Tons*	*Days/acre* [1]	*Days/acre* [1]	*Days/acre* [1]
Minvale cherty silt loam, 6 to 10 percent slopes	55	550	16	28	4.0	2.5	175	190	190
Minvale-Bodine association, hilly							140	140	140
Rock land-Hector-Townley association, steep									
Slickens									
Sylacauga silt loam			30		4.0		180	220	220
Talladega association, very steep									
Tallapoosa-Tatum complex, 6 to 15 percent slopes							150	170	170
Tallapoosa-Tatum association, hilly									
Tatum slaty loam, 2 to 6 percent slopes	60	600	20	25	4.5	3.0	180	210	210
Tatum slaty loam, 6 to 10 percent slopes	50	500		22	4.0	2.5	170	190	190
Toccoa loam	100	700	35		6.0		200	240	240
Townley gravelly loam, 2 to 6 percent slopes	50	550	22	20	4.5		175	200	200
Townley gravelly loam, 6 to 10 percent slopes	40	500	20	15	4.0		150	180	180
Townley association, steep									
Townley-Tatum complex, 6 to 10 percent slopes, eroded	40	325		18	3.0		130	170	170
Urban land-Decatur complex									
Wickham fine sandy loam, terrace, 0 to 2 percent slopes	80	800	35	35	6.0	4.0	190	240	240
Wickham fine sandy loam, terrace, 2 to 6 percent slopes	70	750	30	30	5.5	3.5	180	240	240
Wickham slaty loam, 2 to 6 percent slopes	60	700		25	5.0		170	220	220
Wickham slaty loam, 6 to 10 percent slopes	55	575		22	4.5		160	200	200

[1] Number of days that one animal unit can graze 1 acre without injury to the pasture.

4. Seedbeds are prepared and seeded properly.
5. Good crop varieties and plant mixtures are used at proper planting rates.
6. Diseases, insects, and undesirable plants are controlled.
7. Grazing is regulated.
8. Recommended planting dates are observed.

Use of the Soils for Woodland [3]

Approximately 68 percent, or 321,961 acres, of Talladega County is woodland (*12*). Most of this woodland is owned by private individuals and corporations. Approximately 14 percent, or 45,661 acres, is owned by the U.S. Government.

The type of woodland cover varies from the river bottom hardwoods to the thin, rocky, mountaintop stands of Virginia pine and cedar. Good merchantable timber can be grown on all but the thin, steep, rocky soils, and thus justifies the forestry management practices generally used in the growing of tree crops.

To facilitate the woodland interpretation of the soils in this survey, the soils have been placed in woodland suitability groups according to potential productivity, soil properties that cause hazards and limitations, degree of hazards and limitations, and soil suitability to certain kinds of trees. There are 14 woodland groups in Talladega County.

Woodland Groups

The soils of Talladega County have been placed in woodland groups to assist owners in planning the use of their soil for wood crops. Each group is made up of soils that are suited to the same kinds of trees, that need approximately the same kind of management when the vegetation on them is similar, and that have about the same potential productivity.

Each woodland group is identified by a three-part symbol, such as 1w8, 1o7, or 3f8. The first part of the symbol, always a number, indicates relative potential productivity of the soils in the group: the numeral 1 means very high; 2, high; 3, moderately high; 4, moderate; and 5, low. These ratings are based on field determinations of average site index. Site index is the height, in feet, that the dominant trees of a given species, on a specified kind of soil reach in a natural, unmanaged stand in a stated number of years. For the merchantable hardwoods and softwoods in this county, the site index is the height reached in 50 years, except cottonwood, for which the index is the height reached in 30 years.

The five foregoing ratings are based on field determination of average site index of an indicator forest type or

[3] W. C. AIKEN, woodland conservationist, Soil Conservation Service, helped prepare this section.

species. Site indexes are grouped into site quality classes, and the classes are used to arrive at approximate expected yields per acre in cords and board feet. On the basis of research studies, site index can be converted into approximate expected growth and yield per acre in cords and board feet. Conversions of average site index into volumetric growth and yield are based on research; loblolly and shortleaf pines (*9*), cottonwood (*4*), and oaks (*5*, *6*) are shown in table 3.

The second part of the symbol identifying a woodland group is a small letter. This letter indicates an important soil property that imposes a slight to severe hazard or limitation in managing the soils of the group for wood crops. A letter *c* shows that the main limitation is the kind or amount of clay in the upper part of the soils in the group; *f* shows that the main limitation is the amount of coarse fragments (more than 2 millimeters and less than 10 inches) in the soil; *o* shows that the soils have few limitations that restrict their use for trees; *r* shows that the main limitation is steep slopes; *w* shows that water in or on the soil, either seasonally or year round, is the chief limitation; *x* shows that stones or rocks are the main limitation.

The third part of the symbol indicates the degree of hazard or limitation and general suitability of the soils for certain kinds of trees.

The numeral 1 indicates soils that have no limitation or only slight limitations and that are best suited to needleleaf trees.

The numeral 2 indicates soils that have one or more moderate limitations and are best suited to needleleaf trees.

The numeral 3 indicates soils that have one or more severe limitations and are best suited to needleleaf trees.

The numeral 4 indicates soils that have no or only slight limitations and are best suited to broadleaf trees.

The numeral 5 indicates soils that have one or more moderate limitations and are best suited to broadleaf trees.

The numeral 6 indicates soils that have one or more severe limitations and are best suited to broadleaf trees.

The numeral 7 indicates soils that have no limitation or only slight limitations and are suited to either needleleaf or broadleaf trees.

The numeral 8 indicates soils that have one or more moderate limitations and are suited to either needleleaf or broadleaf trees.

The numeral 9 indicates soils that have one or more severe limitations and are suited to either needleleaf or broadleaf trees.

The numeral 0 indicates that the soils are not suitable for producing timber commercially.

The hazards or limitations that affect management of soils for woodland are windthrow hazard, erosion hazard, equipment limitations, seedling mortality, and plant competition.

To facilitate management, the soils of Talladega County have been placed in woodland groups, which are described in the following pages. Important parts of the description of each woodland group are the verbal ratings made for hazard of windthrow, hazard of erosion, limitation to use of equipment, hazard of seedling mortality, and risk of competition from undesirable plants. These ratings are expressed as *slight*, *moderate*, or *severe*. The following explanations of these ratings apply to the descriptions of all the woodland groups in Talladega County.

Windthrow hazard measures the effect of the soils on root development and the ability of the soil to hold trees firmly. The hazard is *slight* when effective rooting is more than 20 inches and the tree withstands most wind; *moderate*, when effective rooting is from 10 to 20 inches and some trees are blown down during periods of excessive soil wetness and strong wind; *severe*, when effective rooting is 10 inches or less and trees will not stand alone in strong wind.

Erosion hazard refers to the potential hazard of soil losses in well-managed woodland. The hazard is *slight* if expected soil losses are small; *moderate* if some loss of soil is expected and care is needed during logging and construction; *severe* if special methods of operation are necessary for preventing excessive loss of soil. In Talladega County only the steep soils are subject to severe erosion.

Equipment limitations are rated on the basis of soil characteristics that restrict or prohibit the use of equipment commonly used in tending and harvesting the trees. In Talladega County soil characteristics having the most limiting effect are drainage, depth to the water table, slope, and texture of the surface layer. *Slight* means that there is no restriction in the kind of equipment or in the time of year it is used; *moderate* means that use of equipment is restricted for less than 3 months of the year; *severe* means that special equipment is needed and its use is restricted for more than 3 months of the year.

Seedling mortality refers to the expected degree of mortality of planted seedlings as influenced by kinds of soil when plant competition is not a limiting factor. Considered in the ratings are depth to the water table, hazard of flooding, drainage, soil depth and structure, and degree of erosion. Normal rainfall, good planting stock, and proper planting are assumed. A rating of *slight* indicates an expected loss of less than 25 percent of the planted seedlings; *moderate*, a loss of 25 to 50 percent of the seedlings; and *severe*, a loss of more than 50 percent of the seedlings. Special preparation of the site is needed before planting for soils rated severe and for most soils rated moderate.

Plant competition is rated on the basis of the degree to which unwanted plants invade openings in the tree canopy. Considered in the ratings are available moisture capacity, fertility, drainage, and degree of erosion. A rating of *slight* means that there is little or no competition from other plants; *moderate*, that plant competition delays development of fully stocked stands of desirable trees; and *severe*, that plant competition prevents establishment of a desirable stand unless intensive site preparation and such practices as weeding are used to control undesirable plants.

Table 3 shows by woodland group the average site index and the yearly growth of important trees (*4*, *5*, *6*, *9*). Slickens and Urban land-Decatur complex are not listed in table 3.

TABLE 3.—*Woodland groups, average site index, and y early growth per acre of important trees*

Woodland groups and soil symbols	Important trees	Average site index	Yearly growth rate per acre	
			Cords	*Bd. ft. (Scribner rule)*
Group 1w8: Cc.	Loblolly pine	100	1. 8	700
	Yellow-poplar	100	1. 7	520
	Sweetgum	100	1. 6	510
	Bottomland oak	90	1. 4	----------
	Cottonwood	100	2. 4	500
Group 1o7: Gr, To.	Loblolly pine	100	1. 8	720
	Yellow-poplar	100	1. 7	520
	Sweetgum	100	1. 6	510
	Bottomland oak	90	1. 4	----------
	Cottonwood	100	2. 4	500
Group 2w8: Lm, Sy.	Loblolly pine	90	1. 5	590
	Yellow-poplar	100	1. 7	520
	Sweetgum	90	1. 5	400
	Oak	80	1. 4	250
	Cottonwood	100	2. 4	500
Group 2w9: Gu, Le, Me.	Loblolly pine	90	1. 3	590
	Yellow-poplar	100	1. 4	460
	Sweetgum	90	1. 5	400
	Oak	90	1. 3	350
	Cottonwood	100	2. 4	500
Group 3w9: Be, Do.	Loblolly pine	80	1. 3	470
	Sweetgum	80	1. 1	290
	Oak	80	1. 4	250
Group 3o7: AgB, AgC, AgD, AlB2, AlD2, AsB, AsD, CbB, Ch, DcA, DdB, DlB, FcB, FcC, FlD2, HoB, HsD, Ld, LoA, LoB, LtB, MaB, McA, McB, MnB, MnC, WcA, WcB, WkB, WkC.	Loblolly pine	80	1. 2	470
	Shortleaf pine	70	1. 4	410
	Virginia pine	70	1. 1	360
	Yellow-poplar	90	1. 3	410
	Oak	70	0. 6	170
Group 3f8: BhB, BhD, MoE.	Loblolly pine	80	1. 3	470
	Shortleaf pine	60	1. 1	320
	Virginia pine	60	0. 6	290
	Yellow-poplar	90	1. 3	410
	Oak	70	0. 6	170
Group 3x8: AcC, AnE, BmE.	Loblolly pine	80	1. 3	470
	Shortleaf pine	70	1. 4	410
	Virginia pine	70	1. 1	350
	Yellow-poplar	90	--------	360
	Upland oaks	70	0. 6	180
	Redcedar	60	--------	280
Group 4o1: BrC, EtD, TcD, TmB, TmC, TrB, TrC, TtC2.	Loblolly pine	70	1. 1	360
	Shortleaf pine	60	1. 1	320
	Virginia pine	60	0. 6	280
Group 4c2: DeC2, DeE3, DmB2, DmC2, DmE3.	Loblolly pine	70	1. 1	360
	Shortleaf pine	60	1. 1	320
	Virginia pine	60	. 6	280
	Redcedar	40	--------	185
Group 4r2: ThE, TsE.	Loblolly pine	70	1. 1	360
	Shortleaf pine	60	1. 1	320
	Virginia pine	60	0. 6	280
Group 4r3: EmE.	Loblolly pine	70	1. 1	360
	Shortleaf pine	60	1. 1	320
	Virginia pine	60	0. 6	280
Group 4x3: Cm.	Loblolly pine	70	1. 1	360
	Shortleaf pine	60	1. 1	320
	Virginia pine	60	0. 6	280
Group 5x3: RhE, TaF.	Loblolly pine	60	0. 9	240
	Shortleaf pine	50	0. 9	210
	Virginia pine	50	0. 6	240

Woodland group 1w8

Chewacla and Chenneby soils is the only mapping unit in this woodland group. They are deep, somewhat poorly drained soils that are loamy throughout. They are on first bottoms. They are subject to very frequent flooding of very brief duration. They have a seasonally high water table mainly late in winter and early in spring.

This woodland group is suited to both pine and hardwood. Equipment limitations and seedling mortality are moderate because of the seasonal high water table and flooding. Considerable site preparation is necessary to establish and maintain pines. Most of the acreage eventually will be covered with hardwoods.

Species to be favored in existing stands and trees preferred for planting are sweetgum, yellow-poplar, bottomland oaks, sycamore, loblolly pine, and spruce pine. Any species that has a sound, straight stem and is large enough should produce salable logs and wood products.

Woodland group 1o7

This group consists of deep, well-drained, loamy and clayey soils in slight depressions on uplands, along small drainageways, or on first bottoms.

This woodland group is well suited to both pine and hardwood. There are few soil-related management problems. Any tree species native to the county will grow on these soils.

Species to be favored in existing stands and trees preferred for planting are loblolly pine, yellow-poplar, sweetgum, black walnut, oak, sycamore, and cottonwood. High-quality tall trees can be grown on this group of soils under good management.

Woodland group 2w8

This group consists of deep, moderately well drained and somewhat poorly drained, loamy soils on low stream terraces, upland flats, and first bottoms. These soils are subject to very frequent flooding of extremely brief to brief duration, mainly late in winter and early in spring. Slopes are 0 to 2 percent.

This woodland group is well suited to both pine and hardwood. The moisture and fertility of these soils are favorable for rapid growth of good-quality trees of both species. Equipment restrictions and seedling mortality are moderate. Stands of pine have to be established by site preparation, hardwood control, and planting.

Species to be favored in existing stands and preferred trees for planting are yellow-poplar, sweetgum, oak, sycamore, cottonwood, and loblolly pine.

Woodland group 2w9

This group consists of deep, poorly drained, loamy soils on upland flats and first bottoms. These soils are subject to very frequent flooding of brief duration, and they have a seasonal high water table at the surface or within a depth of 12 inches, mainly late in winter and in spring. Slopes are 0 to 2 percent.

This woodland group is well suited to both pine and hardwood. Seedling mortality and equipment limitations are severe. Stands of pine seedlings have to be established by site preparation, hardwood control, and planting. Hardwoods are more numerous than pines on these soils.

Species to be favored in existing stands are yellow-poplar, sweetgum, oak, ash, sycamore, loblolly pine, and spruce pine. Trees preferred for planting are yellow-poplar, sweetgum, sycamore, and loblolly pine.

Woodland group 3w9

This group consists of deep, somewhat poorly drained and poorly drained, loamy soils that have a clayey subsoil. These soils are on upland flats, stream terraces, and first bottoms. They are subject to very frequent flooding of brief duration, and they have a seasonal high water table at the surface or within a depth of 2 feet. Slopes are 0 to 2 percent.

This woodland group is suited to both pine and hardwood. Equipment limitations and seedling mortality are moderate to severe.

Species to be favored in existing stands are sweetgum, oak, loblolly pine, spruce pine, and yellow-poplar. Trees preferred for planting are loblolly pine, spruce pine, sweetgum, and yellow-poplar.

Woodland group 3o7

This group consists of deep, well drained and moderately well drained, loamy soils that have a loamy and clayey subsoil. These soils are on uplands, toe slopes, and stream terraces. Slopes are 0 to 15 percent.

This group is suited to both pine and hardwood. There are no serious soil-related management problems.

Species to be favored in existing stands are loblolly pine, Virginia pine, yellow-poplar, and black walnut. Other acceptable species are shortleaf pine, longleaf pine, cottonwood, sycamore, and oak. Trees preferred for planting are loblolly pine, Virginia pine, yellow-poplar, and black walnut.

Woodland group 3f8

This group consists of deep, well-drained, cherty, gently sloping to steep soils that are loamy throughout. These soils are on uplands. Slopes are 2 to 35 percent.

This woodland group is suited to both pine and hardwood. There are few soil-related management problems. Seedling mortality is moderate, and natural reseeding is slow.

Pine is to be favored in most areas. In the natural draws and moist areas, however, yellow-poplar is desirable. Trees preferred for planting are loblolly pine and Virginia pine. On the cherty dry areas, Virginia pine, longleaf pine, and eastern redcedar are preferred.

Woodland group 3x8

This group consists of deep, well-drained, steep soils that are loamy throughout. These soils are on hillsides. Slopes are 10 to 50 percent.

This woodland group is suited to both pine and hardwood. The stoniness and topography make equipment limitations moderate. Species to be favored in existing stands are loblolly pine, longleaf pine, Virginia pine, yellow-poplar, black walnut, and eastern redcedar. Trees preferred for planting are loblolly pine, Virginia pine, black walnut, and eastern redcedar.

Woodland group 4o1

This group consists of moderately deep and deep, well-drained, gently sloping and sloping, loamy soils that have a loamy or clayey subsoil. These soils are on uplands,

mainly on narrow to fairly broad ridgetops. Slopes are 2 to 10 percent.

This woodland group is suited to pine. Hardwoods are normally considered undesirable on these soils. There are no major soil-related woodland management problems.

Species to be favored in existing stands are loblolly pine, longleaf pine, shortleaf pine, and Virginia pine. Trees preferred for planting are loblolly pine and Virginia pine.

Woodland group 4c2

This group consists of deep, well-drained, loamy, gently sloping to steep soils that have a clayey subsoil. These soils are on uplands and toe slopes. Slopes are 2 to 25 percent.

This woodland group is better suited to pine (fig. 17) than to hardwood. Most of the woodland is pine. These are areas of eroded cropland that have reverted to woodland. Seedling mortality and equipment limitations are moderate because the soils are eroded. Logging is difficult following rains and during wet seasons. Because these soils are clayey and eroded, several years are required to establish a stand naturally, or careful planting is required.

Species to be favored in existing stands are loblolly pine, longleaf pine, Virginia pine, shortleaf pine, and eastern redcedar. Trees preferred for planting are loblolly pine, Virginia pine, and eastern redcedar.

Woodland group 4r2

This group consists of shallow and moderately deep, well-drained, loamy, steep soils on hillsides. The depth to shale ranges from 12 to 50 inches. Slopes are 15 to 45 percent.

Figure 17.—Young loblolly pines. Stand has been thinned to a spacing that gives ample room for growth. The soil is Decatur silty clay loam, 4 to 10 percent slopes, eroded.

This woodland group is better suited to pine than to hardwood. Equipment limitations are moderate because the soils are steep. Other woodland soil-related problems are only slight.

Species to be favored in existing stands are loblolly pine, longleaf pine, shortleaf pine, and Virginia pine. Trees preferred for planting are loblolly pine, longleaf pine, and Virginia pine.

Woodland group 4r3

Enders-Montevallo association, steep, is the only mapping unit in this woodland group. These are shallow and deep, well-drained, steep, loamy soils on hillsides. Slopes are 15 to 50 percent.

This woodland group is better suited to pine than to hardwood. Seedling mortality and equipment limitations are moderate to severe because the soils are steep and stony.

Species to be favored in existing stands are loblolly pine, shortleaf pine, longleaf pine, and Virginia pine. Trees preferred for planting, where planting or seeding is feasible, are loblolly and Virginia pines.

Woodland group 4x3

Clymer stony loam is the only soil in this woodland group. It is a moderately deep, well-drained, steep, loamy soil on hillsides. Slopes are 20 to 50 percent.

This soil is better suited to pine than to hardwood. The stoniness and steepness of the soil severely limit the use of conventional forestry equipment. Locating roads and logging trails is difficult and hand planting is necessary.

Species to be favored in existing stands are loblolly pine, longleaf pine, shortleaf pine, and Virginia pine. Trees preferred for planting are loblolly pine, Virginia pine, and longleaf pine.

Woodland group 5x3

This group consists of shallow to moderately deep, well-drained, stony and rocky, very steep, loamy soils on hillsides. The depth to rock is 0 to 40 inches. Slopes are 15 to 70 percent.

This woodland group is fairly well suited to pine. Stoniness and steep topography make logging and any other woodland practice difficult. Extra effort and special equipment are needed to harvest trees in these areas. Harvesting is done only where the tree volume is large enough and is mature. Costs of establishment and yields make most planting methods prohibitive. These areas are usually used for fire protection and for grazing.

Species to be favored in existing stands are longleaf pine, loblolly pine, and Virginia pine. Trees preferred for planting, where feasible, are loblolly pine, longleaf pine, Virginia pine, and eastern redcedar.

Soils and Wildlife Habitat [4]

The wildlife population of any area depends upon the availability of food, cover, and water in suitable combinations. Habitat is either created, improved, or maintained by establishing desirable vegetation and by developing water supplies in suitable places.

In table 4 each of the soils in Talladega County is rated according to its suitability for the elements of wildlife habitat and also for three kinds of wildlife—openland, woodland, and wetland. These ratings refer only to the suitability of the soil. They do not take into account climate, present land use, or the distribution and density of wildlife and human populations. The suitability of individual sites must be determined by onsite inspection. Suitability was not determined for Slickens and Urban land-Decatur complex.

Table 4 lists the soils in the county and rates their suitability for eight elements of wildlife habitat and for three groups, or kinds, of wildlife. The ratings are 1, 2, 3, and 4, each number indicating relative suitability for various elements. A rating of 1 denotes well suited; 2, suited; 3, poorly suited; and 4, not suited. Soils that are well suited have few limitations, those that are suited have moderate limitations, and those that are poorly suited have severe limitations.

The elements of wildlife habitat and the kinds of wildlife are defined in the paragraphs that follow.

Grain and seed crops are grain-producing and seed-producing annual plants, such as corn, sorghum, annual lespedezas, wheat, millet, cowpeas, and chufa.

Grasses and legumes are domestic perennial grasses and herbaceous legumes that are established by planting. Suitable plants are clover, rye, ryegrass, alfalfa, barley, fescue, annual and bicolor lespedezas, vetch, and oats.

Wild herbaceous upland plants are perennial grasses and weeds that generally are established naturally. Among the plants are blackmilkpeas, blackberry, dewberry, milkpea, partridge pea, beggarweed, and others.

Hardwood plants are nonconiferous trees, shrubs, and woody vines that produce fruits, nuts, buds, catkins, twigs, or foliage that wildlife eat. They commonly are established naturally but may also be planted. Among the plants are oaks, beech, cherry, hawthorn, flowering dogwood, grapes, and Japanese honeysuckle.

Coniferous plants are cone-bearing trees and shrubs. They are important to wildlife mainly as cover, but they also furnish browse or seeds. The plants commonly are established naturally, but in many places are planted. Among these plants are pines, redcedar, and cypress.

Wetland food and cover plants are annual and perennial, wild, herbaceous plants of moist to wet sites. These plants include smartweed, wild millet, bulrush, sedges, cutgrass, and cattails. Submerged and floating aquatic plants are not included.

Shallow water developments are impoundments or excavations for controlling water, generally not more than 6 feet deep. Examples of such developments are low dikes and levees, shallow dugout ponds, level ditches, and other devices that control the water level in areas of bottom-land hardwoods, in marshy streams, or in drainage channels.

Excavated ponds are dugout ponds or a combination of dugout ponds and low dikes or dams. They hold enough water of suitable quality and depth to support fish or wildlife.

[4] ROBERT E. WATERS, biologist, Soil Conservation Service, helped prepare this section.

TABLE 4.—*Suitability of soils for elements of wildlife habitat and kinds of wildlife*

[Numeral 1 means well suited, 2 means suited, 3 mean poorly suited, and 4 means not suited]

Soil and map symbols	Elements of wildlife habitat								Kinds of wildlife		
	Grain and seed crops	Grasses and legumes	Wild herbaceous upland plants	Hardwood woody plants	Coniferous woody plants	Wetland food and cover plants	Shallow water developments	Excavated ponds	Openland	Woodland	Wetland
Allen:											
AcC	3	3	1	1	3	4	4	4	3	1	4
AgB	1	1	1	1	3	4	4	4	1	1	4
AgC	2	1	1	1	3	4	4	4	1	1	4
AgD	2	1	1	1	3	4	4	4	1	1	4
AlB2	2	2	1	1	2	4	4	4	1	1	4
AlD2	3	2	1	1	2	4	4	4	1	1	4
AnE	4	4	1	1	2	4	4	4	4	1	4
Anniston:											
AsB	1	1	1	1	3	4	4	4	1	1	4
AsD	2	1	1	1	3	4	4	4	1	1	4
Beason:											
Be	3	2	4	3	2	1	1	1	3	1	1
Bodine:											
BhB	2	1	1	1	1	4	4	4	1	1	4
BhD	3	1	1	1	1	4	4	4	2	1	4
BmE	4	4	2	1	2	4	4	4	4	1	4
Bremo:											
BrC	3	3	2	1	1	4	4	3	3	1	4
Cane:											
CbB	1	1	1	1	3	4	4	2	1	1	4
Chewacla:											
Cc	2	1	3	2	3	1	1	1	3	1	1
Choccolocco:											
Ch	1	1	1	1	3	3	2	3	1	1	3
Clymer:											
Cm	4	4	1	1	1	4	4	4	4	1	4
Decatur:											
DcA	1	1	1	1	3	4	4	3	1	1	4
DdB	1	1	1	1	3	4	4	4	1	1	4
DeC2	3	2	1	1	2	4	4	4	1	1	4
DeE3	4	4	1	1	2	4	4	4	3	1	4
Dewey:											
DlB	1	1	1	1	3	4	4	4	1	1	4
DmB2	2	1	1	1	2	4	4	4	1	1	4
DmC2	3	2	1	1	2	4	4	4	2	1	4
DmE3	4	4	1	1	2	4	4	4	3	1	4
Dowellton:											
Do	4	2	4	4	2	1	1	1	3	1	1
Enders:											
EmE	4	4	1	1	2	4	4	4	3	1	4
EtD	3	2	1	1	1	4	4	3	2	1	4
Fullerton:											
FcB	1	1	1	1	3	4	4	4	1	1	4
FcC	2	1	1	1	3	4	4	4	1	1	4
FlD2	3	2	1	1	2	4	4	4	3	1	4
Grasmere:											
Gr	1	1	2	2	3	2	2	3	1	1	2
Guthrie:											
Gu	4	2	4	4	2	1	1	1	3	1	1

TABLE 4.—*Suitability of soils for elements of wildlife habitat and kinds of wildlife*—Continued

Soil and map symbols	Elements of wildlife habitat								Kinds of wildlife		
	Grain and seed crops	Grasses and legumes	Wild herbaceous upland plants	Hardwood woody plants	Coniferous woody plants	Wetland food and cover plants	Shallow water developments	Excavated ponds	Openland	Woodland	Wetland
Holston:											
HoB	1	1	1	1	3	4	4	4	1	1	4
HsD	2	1	1	1	3	4	4	4	1	1	4
Leadvale:											
Ld	1	1	2	1	3	3	2	1	1	1	3
Lee:											
Le	4	2	4	4	2	1	1	1	3	1	1
Lobelville:											
Lm	2	1	2	2	3	2	1	1	3	1	1
Locust:											
LoA	1	1	1	1	3	3	2	1	1	1	2
LoB	1	1	1	1	3	3	3	2	1	1	3
LtB	2	2	1	1	3	3	3	2	1	1	3
Masada:											
MaB	1	1	1	1	3	4	3	3	1	1	3
McQueen:											
McA	1	1	1	1	3	3	2	3	1	1	3
McB	1	1	1	1	3	4	3	3	1	1	4
Melvin:											
Me	4	2	4	3	2	1	1	1	3	1	1
Minvale:											
MnB	1	1	1	1	3	4	4	4	1	1	4
MnC	2	1	1	1	3	4	4	4	1	1	4
MoE	4	3	1	1	3	4	4	4	3	1	4
Rock land:											
RhE	4	4	2	1	1	4	4	4	4	1	4
Sylacauga:											
Sy	3	1	3	3	2	1	1	1	3	1	1
Talladega:											
TaF	4	4	1	1	1	4	4	4	4	1	4
Tallapoosa:											
TcD	3	3	1	1	1	4	4	4	3	1	4
ThE	4	4	1	1	3	4	4	4	4	1	4
Tatum:											
TmB	1	1	1	1	3	4	4	3	1	1	4
TmC	2	1	1	1	3	4	4	4	2	1	4
Toccoa:											
To	1	1	3	2	3	2	1	2	1	1	1
Townley:											
TrB	1	1	1	1	1	4	4	2	1	1	4
TrC	2	1	1	1	1	4	4	3	1	1	4
TsE	4	4	1	1	2	4	4	4	3	1	4
TtC2	3	3	1	1	2	4	4	4	3	1	4
Wickham:											
WcA	1	1	1	1	3	3	2	2	1	1	3
WcB	1	1	1	1	3	4	3	3	1	1	4
WkB	1	1	1	1	3	4	3	3	1	1	3
WkC	2	1	1	1	3	4	4	3	1	1	4

Openland wildlife are birds and mammals that normally frequent cropland, pasture, meadow, fence rows, lawns, and areas overgrown with grasses, shrubs, and weeds. Examples of openland wildlife are bobwhite quail, meadowlark, mourning dove, cottontail rabbit, fox, cardinals, and mockingbirds.

Woodland wildlife are birds and mammals that normally frequent stands made up of hardwood trees, shrubs, and vines; coniferous trees and shrubs; or a mixture of these plants. Examples of woodland wildlife are white-tailed deer, gray squirrel, raccoon, wild turkey, thrushes, vireos, tanagers, and woodpeckers.

Wetland wildlife are birds and mammals that normally frequent ponds, marshes, swamps, and other wet areas. Examples of wetland wildlife are beaver, mink, muskrat, black ducks, wood ducks, rails, herons, and shore birds.

Use of the Soils in Engineering [5]

Some soil properties are of special interest to engineers because they affect the construction and maintenance of roads, airports, pipelines, building foundations, facilities for water storage, erosion control structures, drainage systems, and sewage disposal systems. Among the properties most important to engineers are permeability, strength, consolidation characteristics, texture, plasticity, and soil reaction. Depth to unconsolidated materials and topography are also important.

Information concerning these and related soil properties is given in tables 5, 6, and 7. The estimates and interpretations in these tables can be used to—

(1) Make soil and land use studies that will aid in selecting and developing industrial, commercial, residential, and recreational sites.
(2) Make estimates of runoff and erosion characteristics for use in designing drainage and irrigation structures and planning dams and other structures for water and soil conservation.
(3) Make preliminary evaluations of soil and ground conditions that will aid in selecting locations for highways, pipelines, and airports and in planning detailed soil surveys for the intended locations.
(4) Locate sources of sand and gravel for use in structures.
(5) Correlate performance of engineering structures with soil mapping units and thus develop information that will be useful in designing and maintaining the structures.
(6) Determine the suitability of soils for cross-country movement of vehicles and construction equipment.
(7) Supplement information obtained from other published maps, reports, and aerial photographs for the purpose of making soil maps and reports that can be used readily by engineers.
(8) Develop other preliminary estimates for construction purposes pertinent to the particular area.

[5] GUY S. JOHNSON, civil engineer, Soil Conservation Service, helped prepare this section.

The engineering interpretations reported here do not eliminate the need for sampling and testing at the site of specific engineering works involving heavy loads or excavations deeper than the depths reported (ordinarily about 5 feet). Even in these situations, however, the soil map is useful in planning more detailed field investigations and in indicating the kinds of problems that may be expected.

Some of the terms used by soil scientists have special meanings in soil science that may not be familiar to engineers. These terms are defined in the Glossary.

Engineering Classification Systems

The two systems most commonly used in classifying soils for engineering are the systems approved by the American Association of State Highway Officials (AASHO) and the Unified system.

The AASHO system (*2*) is used to classify soils according to those properties that affect use in highway construction. In this system all soil material is classified in seven principal groups. The groups range from A–1, which consists of soils that have the highest bearing strength and are the best soils for subgrade, to A–7, which consists of soils that have the lowest strength when wet. Within each group, the relative engineering value of the soil material is indicated by a group index number. The numbers range from 0 for the best material to 20 for the poorest. The group index number is shown in parentheses following the soil group system (see table 5).

In the Unified system (*13*) soils are classified according to their texture and plasticity and their performance as engineering construction material. Soils are grouped in 15 classes. There are eight classes of coarse-grained soils, identified as GW, GP, GM, GC, SW, SP, SM, and SC; six classes of fine-grained soils, identified as ML, CL, OL, MH, CH, and OH; and one class of highly organic soils, identified as Pt. GP and GW are clean gravels, and GM and GC are gravels that include, respectively, an appreciable amount of nonplastic and plastic fines. SP and SW are clean sands. SM and SC are sands that include fines of silt and clay. ML and CL are silts and clays that have a low liquid limit, and MH and CH are silts and clays that have a high liquid limit. Soils on the borderline between two classes are designated by symbols for both classes; for example, ML–CL.

Soil scientists use the USDA textural classification (*10*). In this, the texture of the soil is determined according to the proportion of soil particles smaller than 2 millimeters in diameter, that is, the proportion of sand, silt, and clay. Textural modifiers, such as gravelly, stony, shaly, and cobbly, are used as needed.

Table 5 shows the AASHO and Unified classifications of specified soils in the county, as determined by laboratory tests. Table 6 shows the estimated classification of all the soils in the county according to all three systems of classification.

Engineering Test Data

Soil samples from nine important series in Talladega County were tested by standard procedures to help evaluate the soils for engineering purposes. The samples were taken from 27 locations, and selected layers of each soil

were sampled at a depth of less than 6 feet. The test data, therefore, may not be adequate for estimating the characteristics of soil material where a deep cut has to be made. Tests were made for moisture-density relationships, grain-size distribution, liquid limit, and plasticity index. The results of tests and the classification of each sample, according to both the AASHO and Unified systems, are given in table 5.

The engineering classifications in table 5 are based on data obtained by mechanical analysis and by tests to determine liquid limits and plastic limits. The mechanical analysis was made by combined sieve and hydrometer methods. The percentages of clay obtained by the hydrometer method should not be used in naming textural classes of soils.

In the *moisture density*, or compaction test, a sample of the soil material is compacted several times with a constant compactive effort, each time at a successively higher moisture content. The density of the compacted material increases as the moisture content increases until the optimum moisture content is reached. After that the density decreases with increase in moisture content. The highest density obtained in the compaction test is termed "maximum density." Moisture-density data are important in construction, for as a rule, optimum stability is obtained if the soil is compacted to about the maximum dry density when it is at approximately the optimum moisture content.

The results of the mechanical analysis may be used to determine the relative proportions of the different size particles that make up the soil sample. The percentage of fine-grained material, obtained by the hydrometer method, which generally is used by engineers, should not be used in determining textural classes of soils.

The tests to determine liquid limit and plastic limit measure the effect of water on consistence of the soil material. As the moisture content of a clayey soil increases from a very dry state, the material changes from a semisolid to a plastic state. As the moisture content is further increased, the material changes from a plastic to a liquid state.

The *plastic limit* is the moisture content at which the soil material passes from a semisolid to a plastic state. The *liquid limit* is the moisture content at which the soil material passes from a plastic to a liquid state. The *plasticity index* is the numerical difference between the liquid limit and plastic limit. It indicates the range in moisture content within which a soil material is in a plastic condition.

Soil Properties Significant in Engineering

In table 6 the soil series of the county and the map symbols for mapping units are listed, and the depth to a seasonal high water table and the depth to bedrock are given. The table also lists, for the principal horizons of a modal profile, the depth from the surface in inches, the USDA texture and the estimated AASHO and Unified classification for each important layer, the percentage of material passing sieves of various sizes, and some characteristics of soil material significant to engineering. The information given in the table is based on the results of testing soils of the series named in table 5, on information given in the rest of the survey, and on information gained from experience with the same kinds of soil in other counties.

Depth to the seasonal high water table and the depth to bedrock are based on field observation. The depth from surface is for one profile and may vary slightly in other profiles.

USDA texture was estimated on the basis of field examinations and available laboratory data. The soils in any series may vary slightly in texture. Thus, in places soil texture is likely to be slightly different than that shown in table 6.

Permeability is the estimated rate that water moves downward through undisturbed soil material. The estimates in table 6 are based on a consideration of the soil structure, consistency, and porosity and on field observations.

Available water capacity (also termed available moisture capacity) is the capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil.

Reaction as shown in the table is the estimated range in pH values for each major horizon as determined in the field and laboratory tests. It indicates the acidity or alkalinity of the soils. A pH of 7, for example, indicates a neutral soil, a lower pH value indicates acidity, and a higher value indicates alkalinity.

The shrink-swell potential is an indication of the volume change to be expected of the soil material, as moisture content changes. It is estimated on the basis of the amount and type of clay in the soil layers. In general, soils classified as A–7 and CH have a high shrink-swell potential. Clean sands and gravels and those having a small amount of nonplastic to slightly plastic fines have low shrink-swell potential, as does most other nonplastic to slightly plastic soil material.

Engineering Interpretations

In table 7 the soils in Talladega County are rated according to their suitability as sources of topsoil, sand, gravel, and road fill. Table 7 also lists the major soil features that affect the use of the soils as sites for highways and agricultural engineering. The information given in the table is based on the results of testing soils of the series named in table 5, on information given in the rest of the survey, and on information gained from experience with the same kinds of soil in other counties.

Topsoil.—Considered in this column is the soil material used to cover or resurface an area where vegetation is to be established and maintained. Ratings take into consideration those properties that affect the productivity and workability of the soil material and the amount of suitable material available.

Sand and gravel.—Ratings are based on the probability that soils contain deposits of sand or gravel. The ratings do not indicate quality of deposits, except generally in terms of grain size. The property considered is sieve size of soil material within the soil and to a predictable depth below the soil.

TABLE 5.—*Engineering*

[Tests performed by Alabama State Highway Department, in accordance with standard

Soil name and location	Parent material	Report No. S67-Ala-61-	Depth	Moisture density [1]	
				Maximum dry density	Optimum moisture
			In.	*Lb./cu. ft.*	*Pct.*
Choccolocco loam: NW¼SW¼ sec. 8, T. 17 S., R. 8 E. 2 miles south of Oxford, Ala. (Modal for series)	General alluvium from soils of the limestone valley and Talladega Hills.	4-1	0-6	102	15
		4-2	6-24	107	18
		4-4	42-60	114	14
Decatur silt loam: NE¼NE¼ sec. 32, T. 17 S., R. 5 E. 1 mile west of Talladega on County Road No. 42 and 0.16 mile south of road, under power line. (Modal for series)	Old valley fill material and residuum from limestone.	12-1	0-6	110	14
		12-3	20-42	99	19
		12-4	42-66	101	23
Guthrie silt loam: SW¼NW¼ sec. 35, T. 17 S., R. 4 E. 6 miles west on Ala. Hwy. 34 from junction of Hwys. 34 and 77, one-fourth mile south on gravel road, and 40 feet east of road. (Modal for series)	Residuum from cherty limestone.	9-2	2-10	110	14
		9-3	10-26	108	16
		9-4	26-45	109	15
		9-5	45-72	120	12
Leadvale silt loam: SE¼SE¼ sec. 5, T. 18 S., R. 5 E. 5½ miles north of Talladega on Riddle farm. (Modal for series)	General alluvium from soils of the limestone valleys and Talladega Hills.	13-1	0-8	105	17
		13-3	12-26	104	18
		13-5	30-50	108	16
		13-6	50-72	114	14
Lobelville silt loam: NE¼SW¼ sec. 13, T. 16 S., R. 5 E. one-eighth mile southeast of Pattons Chapel Church and 100 feet east of road. (Modal for series)	General alluvium from cherty limestone soils.	8-1	0-7	97	19
		8-4	23-37	117	12
		8-5	37-70	116	12
McQueen silt loam: NW¼NE¼ sec. 28, T. 17 S., R. 6 E. 6 miles northeast of Talladega on Ala. Hwy. 21, 2 miles north on farm-to-market road, then one-fourth mile east of road and 200 feet north of Cheaha Creek.	General alluvium from soils of the limestone valley and Talladega Hills.	3-1	0-11	103	16
		3-2	11-26	101	19
		3-5	50-75	121	11
Tallapoosa slaty silt loam: NW¼SE¼ sec. 32, T. 17 S., R. 7 E. 2 miles southeast of Munford, Ala.	Residuum from Talladega slate.	15-2	1-8	102	18
		15-4	14-27	109	14
Tatum slaty loam: SE¼NE¼ sec. 4, T. 18 S., R. 7 E. 5 miles east of McElderry and 200 feet north of Hopeful Church. (Modal for series)	Residuum from Talladega slate.	5-1	0-5	97	20
		5-2	5-24	87	31
		5-4	36-56	96	22
Toccoa loam: NE¼NE¼ sec. 12, T. 17 S., R. 7 E. three-eighths of a mile south of McElderry along Cheaha Creek. (Modal for series)	General alluvium from soils of the limestone valleys and Talladega Hills.	11-2	8-29	113	14
		11-3	29-60	105	18

[1] Based on AASHO Designation: T 99-57, Method A (*2*).

[2] Mechanical analysis according to AASHO Designation: T 88-57 (*2*). Results by this procedure may differ somewhat from results obtained by the soil survey procedure of the Soil Conservation Service (SCS). In the AASHO procedure, the fine material is analyzed by the hydrometer method, and the various grain-size fractions are calculated on the basis of all the material, including that coarser than 2 millimeters in diameter. In the SCS soil survey procedure, the fine material is analyzed by the pipette method, and the material coarser than 2

test data

procedures of the American Association of State Highway Officials (AASHO) (*2*)]

Mechanical analysis [2]							Liquid limit	Plasticity index	Classification	
Percentage passing sieve—						Percentage smaller than 0.005 mm.			AASHO	Unified [3]
2-in.	1-in.	No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm.)	No. 200 (0.074 mm.)					
100	100	94	85	70	43	25	33	3.5	A-4(3)	SM
100	100	99	96	90	82	56	38	9.6	A-4(8)	ML
100	100	96	89	67	40	33	32	6.4	A-4(2)	SM
100	100	99	96	88	65	37	26	8	A-4(7)	CL
100	100	99	98	93	79	65	43	7.6	A-5(8)	ML
100	100	99	99	93	77	64	45	11	A-7-5(9)	ML
100	100	99	97	93	82	60	18	1.3	A-4(8)	ML
100	100	100	99	97	91	74	28	10.4	A-4(8)	CL
100	100	99	99	97	88	67	26	8	A-4(8)	CL
100	100	98	93	85	61	44	20	4.5	A-4(6)	ML-CL
100	99	98	94	89	76	45	31	.5	A-4(8)	ML
100	100	99	96	93	82	66	43	13.3	A-7-5(10)	ML
100	99	95	89	85	68	57	33	11	A-6(8)	CL
100	100	92	83	77	55	56	29	8.2	A-4(6)	CL
100	100	100	99	98	94	60	36	10.3	A-4(8)	ML
100	100	92	79	73	43	40	20	4.1	A-4(4)	SM
100	100	96	93	90	63	46	24	8.5	A-4(7)	CL
100	100	99	99	98	84	19	30	5.5	A-4(8)	ML
100	100	100	99	98	91	60	41	12.2	A-7-6(9)	ML
100	100	99	96	75	60	19	22	1.8	A-4(6)	ML
100	99	82	70	59	34	46	38	6.4	A-2(4)	SM
100	87	52	39	12	9	43	31	4.2	A-1-B(0)	SM
100	100	82	70	58	34	47	34	3.9	A-2(3)	SM
100	100	98	92	87	76	74	62	17.2	A-7-5(15)	MH
100	100	99	96	91	81	59	54	10.7	A-7-5(11)	MH
100	100	99	97	79	45	22	26	3.1	A-4(2)	SM
100	100	99	99	95	61	33	33	5.5	A-4(5)	ML

millimeters in diameter is excluded from calculations of grain-size fractions. The mechanical analysis data used in this table are not suitable for naming textural classes for soils.

[3] SCS and BPR have agreed to consider that all soils having plasticity indexes within two points of the A-line are to be given a borderline classification. An example of a borderline classification obtained by this use is ML-CL.

TABLE 6.—*Estimates of soil*

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils for referring to other series that appear in the first

Soil series and map symbols	Depth to seasonal high water table	Depth to bedrock	Depth from surface	Classification	
				Dominant USDA texture	Unified
	Ft.	*Ft.*	*In.*		
Allen: AcC, AgB, AgC, AgD, AlB2, AlD2, AnE.	>5	>5	0–4	Gravelly fine sandy loam	SM
			4–19	Sandy clay loam	SC
			19–60	Clay loam	CL
Anniston: AsB, AsD	>6	>6	0–4	Loam	ML
			4–26	Clay loam	CL
			26–72	Clay loam to clay	CL
Beason: Be	1–2	>5	0–11	Silt loam	CL
			11–66	Clay	MH
Bodine: BhB, BhD, BmE	>5	>5	0–6	Cherty silt loam	SM
			6–25	Cherty loam	GM
			25–60	Cherty clay loam	GM
Bremo: BrC	[1] 1. 0–1. 5	1–2	0–7	Slaty silt loam	ML
			7–18	Slaty silt loam	SM
			18	Schist	
Cane: CbB	[1] 2	>6	0–5	Fine sandy loam	SM
			5–26	Loam	ML
			26–75	Clay loam (fragipan)	CL
Chenneby Mapped only with Chewacla soils.	0. 5–1. 5	>5	0–36	Silt loam	ML
			36–72	Silty clay loam	CL
*Chewacla: Cc For Chenneby part of Cc, see Chenneby series.	0. 5–1. 5	>5	0–40	Silt loam, gravelly silt loam, and loam	ML
			40–60	Gravelly sandy loam and sand and gravel.	SM
Choccolocco: Ch	4	>5	0–6	Silt loam	SM
			6–42	Silt loam or silty clay loam	ML
			42–60	Sandy loam	SM
Clymer: Cm	>6	2. 0–3. 5	0–6	Stony loam	SM
			6–21	Sandy clay loam	ML
			21–36	Sandy loam	SM
			36	Sandstone.	
Decatur: DcA, DdB, DeC2, DeE3	>6	>6	0–6	Silt loam	CL
			6–42	Clay	ML or CL
			42–75	Clay	ML or CL
Dewey: DlB, DmB2, DmC2, DmE3	>6	>6	0–3	Clay loam	ML or CL
			3–50	Clay loam	CL
			50–80	Clay and clay loam	MH
Dowellton: Do	0–1	>5	0–8	Silt loam	CL
			8–19	Silty clay loam	CL
			19–68	Clay	CH
*Enders: EmE, EtD For Montevallo part of EmE and EtD, see Montevallo series. For Townley part of EtD, see Townley series.	>6	3½–5	0–5	Shaly loam	ML
			5–48	Clay	MH or CH
			48	Shale.	

See footnote at end of table.

properties significant in engineering

in such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions column of this table. The symbol > means more than]

Classification—Continued	Percentage passing sieve—				Permeability	Available water capacity	Reaction	Shrink-swell potential
AASHO	No. 4	No. 10	No. 40	No. 200				
					In./hr.	*In./in. of soil*	*pH*	
A-4	90–95	60–80	50–70	36–45	2. 0–6. 3	0. 14–0. 16	5. 6–6. 0	Low.
A-6	90–100	90–100	60–70	36–50	0. 63–2. 0	0. 13–0. 15	5. 1–6. 0	Low.
A-6	90–100	90–100	75–90	65–75	0. 63–2. 0	0. 13–0. 15	5. 1–5. 5	Low.
A-4	95–100	95–100	75–85	51–65	2. 0 –6. 3	0. 15–0. 17	5. 1–5. 5	Low.
A-6	95–100	90–100	80–90	70–80	0. 63–2. 0	0. 15–0. 17	5. 1–5. 5	Low.
A-6	95–100	90–100	80–95	70–80	0. 63–2. 0	0. 15–0. 17	5. 1–5. 5	Low to moderate.
A-6	95–100	95–100	80–90	60–80	0. 63–2. 0	0. 18–0. 20	4. 5–5. 0	Low.
A-7	95–100	95–100	85–95	80–90	0. 06–0. 20	0. 17–0. 19	4. 5–5. 0	Moderate.
A-4	85–90	75–85	60–75	36–50	2. 0 –6. 3	0. 08–0. 10	5. 6–6. 0	Low.
A-4	60–70	50–60	40–50	36–50	2. 0 –6. 3	0. 07–0. 09	5. 1–5. 5	Low.
A-1	60–70	50–60	20–40	10–15	2. 0 –6. 3	0. 07–0. 09	4. 5–5. 5	Low.
A-4	70–80	65–75	60–75	51–60	0. 63–2. 0	0. 05–0. 07	4. 5–5. 0	Low.
A-4	70–80	65–75	50–65	36–50	0. 63–2. 0	0. 05–0. 07	4. 5–5. 0	Moderate.
A-4	80–90	75–85	60–75	40–50	2. 0 –6. 3	0. 13–0. 15	5. 1–5. 5	Low.
A-4	95–100	85–95	65–80	51–65	0. 63–2. 0	0. 13–0. 15	5. 1–5. 5	Low.
A-6	95–100	85–95	70–85	60–70	0. 06–0. 20	0. 11–0. 13	4. 5–5. 0	Low.
A-4	100	95–100	85–95	65–85	0. 63–2. 0	0. 18–0. 20	4. 5–5. 5	Low.
A-6	100	95–100	90–100	85–95	0. 63–2. 0	0. 18–0. 20	4. 5–5. 0	Moderate.
A-4	100	95–100	75–90	51–75	0. 63–2. 0	0. 17–0. 19	4. 5–5. 0	Low.
A-2	90–100	70–80	50–70	26–35	0. 63–2. 0	0. 13–0. 15	4. 5–5. 0	Low.
A-4	90–100	80–90	65–75	40–50	2. 0–6. 3	0. 14–0. 16	6. 1–6. 5	Low.
A-4	95–100	95–100	85–95	80–90	0. 63–2. 0	0. 14–0. 17	5. 1–6. 0	Moderate.
A-4	90–100	85–95	65–75	36–50	0. 63–2. 0	0. 10–0. 12	5. 1–5. 5	Low.
A-4	80–90	60–75	50–60	36–45	0. 63–2. 0	0. 13–0. 15	4. 5–5. 0	Low.
A-4	85–95	65–80	55–65	51–60	0. 63–2. 0	0. 12–0. 14	4. 5–5. 0	Low.
A-4	80–90	60–80	50–60	36–45	0. 63–2. 0	0. 11–0. 13	4. 5–5. 0	Low.
A-4	98–100	95–100	85–95	60–70	0. 63–2. 0	0. 13–0. 15	5. 6–6. 0	Low.
A-5	98–100	95–100	85–95	75–90	0. 63–2. 0	0. 13–0. 15	5. 1–5. 5	Moderate.
A-7	98–100	95–100	85–95	75–85	0. 63–2. 0	0. 13–0. 15	5. 1–5. 5	Moderate.
A-6	85–95	75–85	65–75	55–70	0. 63–2. 0	0. 12–0. 14	5. 6–6. 0	Low.
A-6	75–85	70–80	65–75	60–70	0. 63–2. 0	0. 12–0. 14	4. 5–5. 5	Moderate.
A-7	95–100	95–100	85–95	80–90	0. 63–2. 0	0. 12–0. 14	5. 1–5. 5	Moderate.
A-6	95–100	90–95	80–90	70–80	0. 20–0. 63	0. 15–0. 17	6. 6–7. 3	Moderate.
A-7	95–100	90–95	85–95	80–90	0. 06–0. 20	0. 13–0. 15	6. 6–7. 3	Moderate.
A-7	95–100	95–100	85–95	80–90	0. 06–0. 20	0. 12–0. 14	6. 6–7. 3	High.
A-4	90–100	85–95	75–90	65–85	0. 63–2. 0	0. 10 0. 12	5. 1–5. 5	Low.
A-7	95–100	90–95	85–95	80–90	0. 63–2. 0	0. 13–0. 15	4. 5–5. 0	Moderate.

TABLE 6.—*Estimates of soil*

Soil series and map symbols	Depth to seasonal high water table	Depth to bedrock	Depth from surface	Classification	
				Dominant USDA texture	Unified
	Ft.	*Ft.*	*In.*		
Fullerton: FcB, FcC, FlD2	>6	>6	0–9	Cherty silt loam	ML
			9–20	Clay	MH
			20–70	Cherty clay	MH
Grasmere: Gr	1. 5–3. 0	>5	0–31	Silty clay and silty clay loam	CL
			31–66	Clay	MH
Guthrie: Gu	0–1	>5	0–10	Silt loam	ML
			10–26	Silty clay loam	CL
			26–45	Silt loam or silty clay loam (fragipan).	CL
			45–72	Loam	ML–CL
Hector	>6	1. 0–1. 67	0–19	Stony and gravelly fine sandy loam	SM
Mapped only with Rock land and Townley soils.			19	Sandstone.	
Holston: HoB, HsD	>6	>6	0–7	Fine sandy loam	SM
			7–45	Loam and sandy clay loam	ML
			45–74	Clay loam	CL
Leadvale: Ld	[1] 1. 5–2. 5	>5	0–8	Silt loam	ML
			8–30	Silty clay loam	ML
			30–50	Clay loam or silty clay loam (fragipan).	CL
			50–72	Clay loam	CL
Lee: Le	0–1	>5	0–20	Silt loam and loam	ML
			20–55	Sandy clay loam	CL
Lobelville: Lm	1. 5–2. 0	>5	0–13	Loam	ML
			13–37	Cherty loam and silt loam	SM
			37–70	Clay loam	CL
Locust: LoA, LoB, LtB	[1] 1. 5–2. 0	4–6	0–8	Silt loam	SM
			8–24	Loam	ML or CL
			24–64	Loam and sandy loam (fragipan)	ML
			64–70	Gravel and sand	SM
Masada: MaB	>6	3. 5–6	0–11	Slaty loam and loam	ML
			11–45	Clay loam and gravelly clay loam	CL
			45–70	Loam	ML
McQueen: McA, McB	3–4	>6	0–10	Silt loam	ML
			10–36	Silty clay loam	ML
			36–72	Sandy loam or loamy sand	SM or ML
Melvin: Me	0–1	3–5	0–11	Silt loam	CL
			11–54	Silty clay loam	CL
			54	Limestone.	
*Minvale: MnB, MnC, MoE	>6	>6	0–16	Cherty silt loam and loam	ML
For Bodine part of MoE, see Bodine series.			16–80	Clay loam and cherty clay loam	CL
Montevallo	>6	1. 0–1. 5	0–11	Shaly silt loam	GM
Mapped only with Enders and Townley soils.			11	Shale.	

See footnote at end of table.

properties significant in engineering—Continued

Classification—Continued	Percentage passing sieve—				Permeability	Available water capacity	Reaction	Shrink-swell potential
AASHO	No. 4	No. 10	No. 40	No. 200				
					In./hr.	*In./in. of soil*	*pH*	
A-4	85-95	80-90	65-75	51-65	0. 63-2. 0	0. 11-0. 13	5. 1-6. 0	Low.
A-6	75-90	75-85	70-85	60-80	0. 63-2. 0	0. 11-0. 13	4. 5-5. 0	Moderate.
A-6	75-90	70-80	60-70	55-65	0. 63-2. 0	0. 11-0. 13	4. 5-5. 0	Moderate.
A-7	98-100	90-100	85-95	75-85	0. 63-2. 0	0. 18-0. 20	4. 5-5. 0	Low to moderate.
A-7	98-100	95-100	85-95	80-90	0. 63-2. 0	0. 17-0. 19	5. 6-6. 0	Moderate.
A-4	98-100	95-100	85-95	75-85	0. 63-2. 0	0. 20-0. 21	4. 5-5. 0	Low.
A-4	98-100	95-100	90-100	85-95	0. 06-0. 2	0. 17-0. 19	4. 5-5. 0	Low.
A-4	98-100	95-100	90-100	85-95	0. 06-0. 2	0. 14-0. 16	4. 5-5. 0	Low.
A-4	90-100	85-95	75-85	55-65	0. 63-2. 0	0. 15-0. 16	4. 5-5. 0	Low.
A-4	80-90	60-75	50-60	36-45	2. 0-6. 3	0. 08-0. 10	4. 5-5. 5	Low.
A-4	95-100	85-95	75-85	40-50	0. 63-2. 0	0. 13-0. 15	6. 1-6. 5	Low.
A-4	95-100	85-95	60-80	51-60	0. 63-2. 0	0. 13-0. 15	4. 5-5. 5	Low.
A-6	95-100	85-95	75-85	60-70	0. 63-2. 0	0. 13-0. 15	5. 6-6. 0	Low.
A-4	95-100	90-95	85-95	75-85	0. 63-2. 0	0. 13-0. 15	6. 1-6. 5	Low.
A-7	95-100	90-98	85-95	75-85	0. 63-2. 0	0. 13-0. 15	5. 1-6. 5	Low.
A-6	90-100	85-95	80-90	65-80	0. 20-0. 63	0. 09-0. 11	6. 1-6. 5	Moderate.
A-4	85-95	80-90	70-80	55-70	0. 20-0. 63	0. 12-0. 14	6. 6-7. 3	Low.
A-4	90-98	80-90	70-80	51-60	0. 63-2. 0	0. 14-0. 16	5. 1-5. 5	Low.
A-6	90-95	65-80	60-70	51-60	0. 63-2. 0	0. 12-0. 14	5. 1-5. 5	Low.
A-4	95-100	90-100	90-100	80-95	0. 63-2. 0	0. 13-0. 15	5. 1-6. 0	Low.
A-4	90-100	75-85	70-80	36-50	0. 63-2. 0	0. 11-0. 13	4. 5-5. 0	Low.
A-4 or A-6	95-100	90-100	85-95	60-70	0. 63-2. 0	0. 11-0. 13	4. 5-5. 0	Low.
A-4	75-85	60-75	50-60	40-50	0. 63-2. 0	0. 13-0. 15	5. 1-5. 5	Low.
A-6	85-95	75-85	65-75	55-65	0. 63-2. 0	0. 13-0. 15	4. 5-5. 0	Low.
A-4	85-95	75-85	60-75	51-60	0. 06-0. 20	0. 09-0. 11	4. 5-5. 5	Low.
A-2	75-85	50-60	45-55	26-35	0. 06-0. 20	0. 05-0. 07	4. 5-5. 0	Low.
A-4	80-90	70-80	60-70	51-60	0. 63-2. 0	0. 13-0. 15	4. 5-5. 5	Low.
A-6	85-95	75-85	65-75	60-70	0. 63-2. 0	0. 13-0. 15	4. 5-5. 0	Low.
A-4	80-90	70-80	60-70	51-60	0. 63-2. 0	0. 13-0. 15	4. 5-5. 0	Low.
A-4	95-100	90-100	90-100	80-90	0. 63-2. 0	0. 14-0. 16	5. 6-6. 0	Low.
A-7	98-100	95-100	90-100	85-95	0. 63-2. 0	0. 14-0. 16	5. 6-6. 0	Moderate.
A-2 or A-4	95-100	90-100	60-75	26-60	2. 0-6. 3	0. 10-0. 12	4. 5-5. 0	Low.
A-6	95-100	90-100	85-95	60-75	0. 63-2. 0	0. 15-0. 17	6. 6-7. 3	Low.
A-7	95-100	90-100	80-90	65-80	0. 20-0. 63	0. 15-0. 17	6. 6-7. 8	Moderate.
A-4	80-90	70-80	60-70	51-60	0. 63-2. 0	0. 14-0. 16	4. 5-5. 0	Low.
A-6	85-95	70-80	65-75	55-65	0. 63-2. 0	0. 13-0. 15	4. 5-5. 0	Moderate.
A-1	40-50	25-40	5-30	5-25	0. 63-2. 0	0. 08-0. 10	5. 6-6. 0	Low.

TABLE 6.—*Estimates of soil*

Soil series and map symbols	Depth to seasonal high water table	Depth to bedrock	Depth from surface	Classification	
				Dominant USDA texture	Unified
	Ft.	*Ft.*	*In.*		
*Rock land: RhE. No valid estimates can be made for Rock land. For Hector part and Townley part of RhE, see Hector and Townley series.	>6	0–1			
Slickens: Sk. No valid estimates can be made.					
Sylacauga: Sy	1	>5	0–5	Silt loam	ML
			5–50	Silty clay loam and loam	CL
			50–60	Sand and gravel	GM
Talladega: TaF	>6	0–3	0–3	Stony loam	SM
			3–15	Slaty silty clay loam	SM
			15	Phyllite and slate.	
*Tallapoosa: TcD, ThE. For Tatum part of these units, see Tatum series.	>6	1. 0–1. 5	0–7	Slaty silt loam	SM
			7–17	Slaty silty clay loam	SM
			17	Slate.	
Tatum: TmB, TmC	>4	2. 5–4. 0	0–5	Slaty loam	SM
			5–36	Silty clay and silty clay loam	MH
			36–50	Silt loam	MH
			50	Slate.	
Toccoa: To	2. 5–3. 0	>6	0–29	Loam	SM
			29–72	Silt loam	ML
*Townley: TrB, TrC, TsE, TtC2. For Tatum part of unit TtC2, see Tatum series.	>6	2–3	0–8	Gravelly loam	ML
			8–24	Silty clay or clay	MH
			24	Shale and sandstone.	
*Urban land: Ud. No valid estimates can be made for Urban land. For Decatur part of Ud, see Decatur series.					
Wickham: WcA, WcB, WkB, WkC.	4–6	3 to >6	0–8	Fine sandy loam	SM
			8–42	Sandy clay loam	SC
			42–60	Sandy loam	SM
			60–72	Sand or loamy sand	SM

[1] Water table is perched.

properties significant in engineering—Continued

Classification—Continued	Percentage passing sieve—				Permeability	Available water capacity	Reaction	Shrink-swell potential
AASHO	No. 4	No. 10	No. 40	No. 200				
					In./hr.	*In./in. of soil*	*pH*	
A-4	100	95–100	85–95	70–80	0. 63–2. 0	0. 14–0. 16	4. 5–5. 0	Low.
A-6	100	95–100	90–95	85–90	0. 06–0. 20	0. 16–0. 18	4. 5–5. 0	Moderate.
A-2	70–90	50–60	40–50	26–35	2. 0 –6. 3	0. 08–0. 10	4. 5–5. 0	Low.
A-2	75–85	65–75	35–65	26–35	0. 63–2. 0	0. 12–0. 14	4. 5–5. 0	Low.
A-1	70–80	50–65	35–50	5–25	0. 63–2. 0	0. 12–0. 14	4. 5–5. 0	Low.
A-2	75–85	65–75	55–65	26–35	0. 63–2. 0	0. 10–0. 12	4. 5–5. 0	Low.
A-1	50–60	35–45	10–30	5–25	0. 63–2. 0	0. 10–0. 12	4. 5–5. 0	Low.
A-2 or A-4	80–90	65–75	55–65	30–45	2. 0 –6. 3	0. 11–0. 13	5. 1–5. 5	Low.
A-7	95–100	90–100	80–90	70–80	0. 63–2. 0	0. 11–0. 13	5. 6–6. 0	Moderate.
A-7	95–100	90–100	85–95	70–90	0. 63–2. 0	0. 10–0. 12	5. 6–6. 0	Moderate.
A-4	95–100	90–100	75–85	40–50	0. 63–2. 0	0. 10–0. 12	5. 6–6. 0	Low.
A-4	95–100	90–100	85–95	60–70	0. 63–2. 0	0. 10–0. 12	4. 5–5. 0	Low to moderate.
A-4	80–90	70–80	55–70	51–60	0. 63–2. 0	0. 12–0. 14	4. 5–5. 0	Low.
A-7	95–100	90–100	85–95	80–90	0. 06–0. 20	0. 13–0. 15	4. 5–5. 0	Moderate.
A-4	85–95	50–60	45–55	36–45	2. 0 –6. 3	0. 13–0. 15	5. 6–6. 0	Low.
A-6	90–100	60–70	50–60	40–50	0. 63–2. 0	0. 13–0. 15	5. 1–5. 5	Low.
A-4	90–100	50–60	45–55	36–45	0. 63–2. 0	0. 13–0. 15	4. 5–5. 0	Low.
A-2	80–100	45–55	35–45	26–35	2. 0 –6. 3	0. 08–0. 10	4. 5–5. 0	Low.

TABLE 7.—*Engineering*

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils for referring to other series that

Soil series and map symbols	Suitability as source of—				Soil features affecting—
	Topsoil	Sand	Gravel	Road fill	Highway location
Allen: AcC, AgB, AgC, AgD, AlB2, AlD2, AnE.	Fair: coarse fragments.	Unsuitable: fine-grained material.	Unsuitable: no gravel in surface layer and subsoil.	Fair: fair traffic-supporting capacity.	Slopes of 2 to 50 percent; erodible in cuts.
Anniston: AsB, AsD	Fair: clay loam texture.	Unsuitable: fine-grained material.	Unsuitable: no gravel in surface layer and subsoil.	Fair: fair traffic-supporting capacity.	Erodible in cuts
Beason: Be	Fair: wetness; silt loam and clay texture.	Unsuitable: high clay content.	Unsuitable: high clay content.	Poor: poor traffic-supporting capacity.	High water table; flooding.
Bodine: BhB, BhD, BmE	Poor: high content of chert fragments.	Unsuitable: no sand in surface layer and subsoil.	Good: good source for chert.	Good	Slopes of 2 to 45 percent.
Bremo: BrC	Fair: limited quantity of suitable material.	Unsuitable: 1 to 2 feet to rock.	Unsuitable: 1 to 2 feet to rock.	Poor: limited quantity of suitable material.	Slopes of 0 to 12 percent; 1 to 2 feet to rock.
Cane: CbB	Fair: limited quantity of suitable material.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity.	Seepage in cuts above fragipan.
Chenneby Mapped only with Chewacla soils.	Fair: wetness	Fair: some areas underlain by well-graded sand and gravel.	Fair: some areas underlain by well-graded sand and gravel.	Fair: fair traffic-supporting capacity; wetness.	High water table; subject to flooding.
*Chewacla: Cc For Chenneby part, see Chenneby series.	Fair: wetness	Fair: some areas underlain by well-graded sand and gravel; high water table.	Fair: some areas underlain by well-graded sand and gravel; high water table.	Fair: fair traffic-supporting capacity; wetness.	High water table; subject to flooding.
Choccolocco: Ch	Fair: limited quantity of suitable material.	Fair: well-graded sand and gravel below a depth of 4 feet.	Fair: well-graded sand and gravel below a depth of 4 feet.	Fair: fair traffic-supporting capacity.	Occasional flooding.
Clymer: Cm	Poor: coarse fragments.	Unsuitable: sandstone bedrock at a depth of 24 to 42 inches.	Unsuitable: sandstone bedrock at a depth of 24 to 42 inches.	Poor: stoniness	Slopes of 20 to 50 percent; stony and rocky.

interpretations

in such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions appear in the first column of this table]

Soil features affecting—Continued						
Wet-weather grading	Farm ponds		Agricultural drainage	Irrigation	Terraces and diversions	Waterways
	Reservoir area	Embankment				
All features favorable.	Moderate permeability.	Cobblestones and stones in some areas; high strength and stability.	Good drainage	Slopes of 2 to 50 percent; cobblestones and stones in some areas.	Features favorable if slope is as much as 10 percent.	Slopes of 2 to 50 percent.
Plastic when wet	Moderate permeability.	Moderate strength and stability.	Good drainage	All features favorable.	Features favorable if slope is less than 10 percent.	All features favorable.
High water table; sticky and plastic when wet; slow runoff.	All features favorable.	High compressibility.	Somewhat poor drainage; slow permeability.	Somewhat poor drainage; high water table; flooding; slow permeability.	Slopes of 0 to 2 percent.	Somewhat poor drainage; high water table.
All features favorable.	Moderately rapid permeability.	Poor resistance to piping and erosion.	Good drainage	Low available water capacity; cherty material; 2 to 45 percent slopes.	Features favorable if slope is as much as 10 percent.	Difficult to establish and maintain vegetation.
1 to 2 feet to rock; material sticky when wet.	1 to 2 feet to rock.	1 to 2 feet to rock.	Good drainage	Shallow, slaty soil; low available water capacity.	1 to 2 feet to bedrock.	1 to 2 feet to rock; low available water capacity.
Perched water table.	All features favorable.	All features favorable.	Permeability slow in fragipan.	All features favorable.	All features favorable.	All features favorable.
Subject to flooding; high water table.	Subject to flooding; moderate permeability.	Moderate strength and stability.	Flooding may destroy outlets and ditches.	Slopes of 0 to 2 percent; subject to flooding.	Slopes of 0 to 2 percent; flooding.	Nearly level; subject to flooding.
Subject to flooding; high water table.	Subject to flooding; moderate permeability.	Moderate strength and stability.	Flooding may destroy outlets and ditches.	Slopes of 0 to 2 percent; subject to flooding.	Slopes of 0 to 2 percent.	Nearly level; subject to flooding.
High water table at a depth of 3 to 4 feet.	Sand and gravel at a depth of 4 to 6 feet; moderate permeability.	Fair slope stability.	Good drainage	All features favorable.	All features favorable.	All features favorable.
All features favorable.	Steep stony area.	Many stones and rocks; 24 to 42 inches to rock.	Good drainage	Slopes of 20 to 50 percent.	Slopes of 20 to 50 percent; many stones and rocks.	Slopes of 20 to 50 percent; many stones and rocks.

TABLE 7.—*Engineering*

Soil series and map symbols	Suitability as source of—				Soil features affecting—
	Topsoil	Sand	Gravel	Road fill	Highway location
Decatur: DcA, DdB, DeC2, DeE3.	Fair: silt loam and clay texture.	Unsuitable: high clay content.	Unsuitable: high content of fines.	Fair: fair traffic-supporting. capacity.	Cuts erode readily; slopes of 0 to 25 percent; moderate shrink-swell potential.
Dewey: DlB, DmB2, DmC2, DmE3.	Fair: clay loam texture.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity.	Cuts erode readily; slopes of 0 to 25 percent; moderate shrink-swell potential.
Dowellton: Do	Poor: silt loam and silty clay loam texture; wetness.	Unsuitable: high content of fines.	Unsuitable: fine-grained material.	Poor: high shrink-swell; wetness.	Floods; high water table; poor drainage; high shrink-swell potential.
*Enders: EmE, EtD. For Montevallo part of these units, refer to Montevallo series; for Townley part of unit EtD, refer to Townley series.	Poor: coarse fragments.	Unsuitable: high clay content in subsoil.	Unsuitable: high clay content in subsoil.	Poor: poor traffic-supporting capacity.	42 to 60 inches to shale; slopes of 6 to 45 percent.
Fullerton: FcB, FcC, FlD2	Poor: coarse fragments.	Unsuitable: no sand in surface layer and subsoil.	Some areas a good source of chert.	Poor: fair traffic-supporting capacity.	Moderate shrink-swell potential.
Grasmere: Gr	Fair: silty clay and silty clay loam texture.	Unsuitable: fine-grained material.	Unsuitable: fine-grained material.	Fair: fair traffic-supporting capacity.	Low areas subject to seepage and flooding; moderate shrink-swell potential.
Guthrie: Gu	Poor: wetness	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Poor: wetness	Poor drainage; high water table; flooding.
Hector. Mapped only with Rock land and Townley soils.	Poor: coarse fragments.	Unsuitable: sandstone bedrock at a depth of 12 to 20 inches.	Unsuitable: sandstone bedrock at a depth 12 to 20 inches.	Poor: limited quantity of suitable material.	Slopes of 15 to 50 percent; 12 to 20 inches to rock.
Holston: HoB, HsD	Good: coarse fragments in places.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity.	Slopes of 0 to 15 percent.

interpretations—Continued

Soil features affecting—Continued						
Wet-weather grading	Farm ponds		Agricultural drainage	Irrigation	Terraces and diversions	Waterways
	Reservoir area	Embankment				
Material sticky and plastic when wet.	Moderate permeability; limestone sinks a hazard.	High compressibility.	Good drainage	Slopes of 0 to 25 percent; medium to slow intake rate in eroded areas.	Material highly erodible; complex slopes.	Material highly erodible.
Material sticky and plastic when wet.	Moderate permeability; limestone sinks a hazard.	High compressibility.	Good drainage	Slopes of 0 to 25 percent; medium to slow intake rate in eroded areas.	Material erodible; complex slopes.	Material highly erodible.
Floods; high water table; material very sticky and plastic when wet.	All features favorable.	Fair slope stability.	Slow permeability; outlets difficult to locate.	High water table; flooding; slow permeability.	Slopes of 0 to 2 percent.	Level; high water table; flooding; poor drainage.
Material sticky and plastic when wet.	All features favorable.	Fair slope stability.	Good drainage	Very high erosion hazard; slopes of 6 to 45 percent.	Material highly erodible; 42 to 60 inches to shale.	42 inches to shale; material highly erodible.
Material sticky when wet.	Moderate permeability; limestone sinks a hazard.	High compressibility.	Good drainage	Slopes of 2 to 15 percent; slow intake rate in eroded areas.	Highly erodible; complex slopes.	Highly erodible; cherty material.
Material sticky and plastic when wet; flooding in low areas.	Moderate permeability; limestone sinks a hazard.	Medium compressibility.	Good drainage	Slow intake rate	Slopes of 0 to 2 percent.	All features favorable.
Low wet areas; high water table; ponding.	All features favorable.	Medium compressibility.	Low wet areas; slow permeability; outlets difficult to locate.	High water table; poor drainage; slow permeability.	Slopes of 0 to 2 percent.	Fragipan at a depth of about 2 feet; compact in place; high water table; floods; poor drainage.
All features favorable.	Steep, stony areas.	Many stones and rocks; shallow soil.	Excessive drainage.	Slopes of 15 to 50 percent; shallow, rocky soil.	Slopes of 15 to 50 percent; shallow, rocky soil.	Slopes of 15 to 50 percent; shallow, rocky soil.
All features favorable.	Moderate permeability.	All features favorable.	Good drainage.	Slopes of 0 to 15 percent.	All features favorable.	All features favorable.

TABLE 7.—*Engineering*

Soil series and map symbols	Suitability as source of—				Soil features affecting—
	Topsoil	Sand	Gravel	Road fill	Highway location
Leadvale: Ld	Fair: silt loam and silty clay loam texture.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity; wetness.	Seepage in cuts above fragipan; perched water table.
Lee: Le	Poor: wetness	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Poor: wetness	High water table; flooding; poor drainage.
Lobelville: Lm	Poor: coarse fragments.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity; wetness.	Very frequent flooding.
Locust: LoA, LoB, LtB	Fair: silt loam texture; poor in areas having coarse fragments.	Unsuitable: high content of fines.	Unsuitable: high content of fines; some areas a good source of chert.	Fair: fair traffic-supporting capacity; wetness.	Fragipan at a depth of 2 feet; seepage in cuts above fragipan.
Masada: MaB	Poor: coarse fragments.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity.	Slopes of 2 to 8 percent; seepage in cuts.
McQueen: McA, McB	Fair: limited quantity of suitable material.	Fair: level-graded sand and gravel below a depth of 3.5 feet.	Fair: well-graded sand and gravel below a depth of 3.5 feet.	Fair: fair traffic-supporting capacity.	Occasional flooding.
Melvin: Me	Poor: wetness	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Poor: wetness	High water table; flooding; poor drainage.
*Minvale: MnB, MnC, MoE. For Bodine part of unit MoE, see Bodine series.	Poor: coarse fragments.	Unsuitable: no sand in surface layer and subsoil.	Some areas a good source chert.	Fair: fair traffic-supporting capacity.	Slopes of 2 to 35 percent.
Montevallo. Mapped only with Enders and Townley soils.	Poor: coarse fragments.	Unsuitable: shallow to shale.	Unsuitable: shallow to shale.	Poor: limited quantity of suitable material.	Slopes of 6 to 45 percent; shallow to shale.
*Rock land: RhE. Variable. Onsite investigation needed. For Hector and Townley part, see Hector and Townley series.					
Slickens: Sk. Variable. Onsite investigation needed.					

interpretations—Continued

Soil features affecting—Continued						
Wet-weather grading	Farm ponds		Agricultural drainage	Irrigation	Terraces and diversions	Waterways
	Reservoir area	Embankment				
Perched water table.	All features favorable.	All features favorable.	Permeability moderately slow in fragipan.	All features favorable.	Slopes of 0 to 2 percent.	Nearly level; fragipan at a depth of 20 to 36 inches.
High water table: poor drainage; flooding.	Moderate permeability.	Poor resistance to piping.	High water table; outlets difficult to find; very frequent flooding.	Poor drainage; floods; high water table.	Slopes of 0 to 2 percent; flooding.	High water table; poor drainage; nearly level; flooding.
Very frequent flooding.	Flooding; moderate permeability.	Poor resistance to piping.	Very frequent flooding.	Very frequent flooding.	Slopes of 0 to 2 percent; flooding.	Flooding.
Perched water table.	All features favorable.	Medium compressibility.	Permeability slow in fragipan.	Slopes of 0 to 6 percent.	All features favorable.	Fragipan at a depth of 20 to 36 inches; compact material.
Subject to seepage.	Moderate permeability.	Medium compressibility.	Good drainage	Slopes of 2 to 8 percent.	All features favorable.	All features favorable.
Seasonal high water table at a depth of 3 to 4 feet.	Sand and gravel at a depth of 3.5 feet.	Poor resistance to piping.	Good drainage	All features favorable.	All features favorable.	All features favorable.
Low wet area; high water table; poorly drained; flooding.	All features favorable.	Medium compressibility.	Moderately slow permeability; high water table; very frequent flooding.	Poor drainage; floods; high water table; moderately slow permeability.	Slopes of 0 to 2 percent; flooding.	High water table; poor drainage; nearly level; flooding.
Slightly sticky and plastic when wet.	Moderate permeability; limestone sinks a hazard.	Medium compressibility.	Good drainage	Slopes of 2 to 35 percent; surface cherty.	Soil properties favorable if slope is less than 10 percent.	Slopes of 2 to 35 percent.
Seepage in cuts	10 to 20 inches to shale.	10 to 20 inches to shale.	Good drainage	Slopes of 6 to 45 percent; shallow.	Shallow; slopes 6 to 45 percent.	Shallow; slopes 6 to 45 percent.

TABLE 7.—*Engineering*

Soil series and map symbols	Suitability as source of—				Soil features affecting—
	Topsoil	Sand	Gravel	Road fill	Highway location
Sylacauga: Sy	Fair: wetness; silt loam and silty clay loam texture.	Unsuitable: high content of silt and clay.	Unsuitable: high content of silt and clay.	Fair: fair traffic-supporting capacity; wetness.	High water table; subject to flooding.
Talladega: TaF	Poor: coarse fragments.	Unsuitable: shallow to slate and phyllite.	Unsuitable: shallow to slate and phyllite.	Poor: limited quantity of suitable material.	Slopes of 45 to 70 percent; 0 to 36 inches to slate.
*Tallapoosa: TcD, ThE. For Tatum part of these units, see Tatum series.	Poor: coarse fragments.	Unsuitable: slate bedrock at a depth of 12 to 18 inches.	Unsuitable: no gravel in surface layer and subsoil.	Poor: limited quantity of suitable material.	Slopes of 6 to 45 percent; 12 to 18 inches to soft slate.
Tatum: TmB, TmC	Poor: coarse fragments.	Unsuitable: high clay content.	Unsuitable: high clay content.	Poor: poor traffic-supporting capacity.	Slopes of 2 to 45 percent; 2½ to 4 feet to rock.
Toccoa: To	Good	Fair: some areas underlain by well-graded sand and gravel; subject to flooding.	Fair: some areas underlain by well-graded sand and gravel; subject to flooding.	Good to fair: fair traffic-supporting capacity.	Subject to flooding.
*Townley: TrB, TrC, TsE, TtC2. For Tatum part of TtC2, see Tatum series.	Poor: coarse fragments.	Unsuitable: high clay content.	Unsuitable: high clay content.	Poor: poor traffic-supporting capacity.	Slopes of 2 to 45 percent; 24 to 36 inches to shale.
*Urban land: Ud. Variable. Onsite determination needed. For Decatur part of this unit, see Decatur series.					
Wickham: WcA, WcB	Good	Good: well-graded gravel below a depth of 3½ to 4 feet.	Good: well-graded gravel below a depth of 3½ to 4 feet.	Fair: fair traffic-supporting capacity.	Occasional flooding.
WkB, WkC	Poor: coarse fragments.	Unsuitable: high content of fines.	Unsuitable: high content of fines.	Fair: fair traffic-supporting capacity.	Slopes of 2 to 10 percent.

interpretations—Continued

Soil features affecting—Continued						
Wet-weather grading	Farm ponds		Agricultural drainage	Irrigation	Terraces and diversions	Waterways
	Reservoir area	Embankment				
High water table--	All features favorable.	Medium compressibility.	Slow permeability; high water table.	High water table; subject to flooding; slow permeability.	Slopes of 0 to 2 percent.	Somewhat poor drainage; high water table; nearly level.
All features favorable.	0 to 36 inches to slate.	0 to 36 inches to slate.	Good drainage--	Slopes of 45 to 70 percent.	Slopes of 45 to 70 percent; shallow, slaty soil.	Slopes of 45 to 70 percent; shallow, slaty soil.
All features favorable.	Moderate permeability; 12 to 18 inches to slate.	12 to 18 inches to slate.	Good drainage--	Slopes of 6 to 45 percent; low available water capacity; shallow soil.	Steep slopes; shallow soil.	Slopes of 6 to 45 percent; shallow soil.
Clayey material; sticky and plastic when wet.	Moderate permeability.	High compressibility.	Good drainage--	Slopes of 2 to 45 percent; highly erodible.	Slopes of 2 to 45 percent; highly erodible.	Slopes of 2 to 45 percent; 2½ to 4 feet to rock; highly erodible.
Subject to flooding.	Moderate permeability.	Poor resistance to piping.	Good drainage; very frequent flooding.	Subject to flooding.	Slopes of 0 to 2 percent; flooding.	Nearly level; subject to flooding.
Sticky and plastic when wet.	24 to 36 inches to shale; slow permeability.	High compressibility.	Good drainage--	Slopes of 2 to 45 percent; slow permeability.	Slopes of 2 to 45 percent; highly erodible.	Slopes of 2 to 45 percent; 24 to 36 inches to shale.
Water table at depth of 3½ feet.	Sand and gravel at a depth of 3 to 4 feet.	All features favorable.	Good drainage--	Slopes of 0 to 6 percent.	All features favorable.	All features favorable.
Subject to water seepage.	Moderate permeability.	All features favorable.	Good drainage--	Slopes of 2 to 10 percent.	All features favorable.	All features favorable.

Road fill.—Considered in this column is the soil material on which a subbase is laid and the pavement is built. Ratings take into consideration those properties that affect suitability for road fill and are (1) the stability and traffic-supporting capacity of the subgrade, and (2) the ease of excavation of the borrow material.

Highway location.—Factors to be considered for highway location are those soil features that affect the performance of highways. The entire soil profile is evaluated based on an undisturbed soil. Some properties important in rating the soil for this purpose are depth to bedrock, depth to water table, stability of slopes, erodibility of soil material, flood hazard, slope, seepage, presence of fragipan, and shrink-swell potential.

Wet-weather grading.—Ratings in this column relate to the ease with which the soils can be moved and traversed by ordinary construction equipment during wet weather. Factors that affect wet-weather grading are plasticity, stickiness, water table, flood hazard, drainage, and seepage in cuts.

Pond reservoirs.—Ratings are for areas behind a dam or embankment where water is collected and stored for use. Properties that affect pond reservoir areas are those that affect seepage rate; namely, soil permeability and depth to fractured or permeable bedrock or other permeable material.

Farm ponds.—Embankments are raised structures of soil material constructed across drainageways in order to impound water. These embankments are generally less than 20 feet high. The best soils for this purpose have good slope stability, low permeability, slight compressibility under load, and good resistance to piping and erosion. They are also free of stones or rocks and thick enough for easy excavation.

Agricultural drainage.—Ratings take into consideration those features and qualities of the soil that affect the installation and performance of surface and subsurface drainage. Soil factors considered are permeability, internal drainage, flooding, depth to water table, and presence of fragipan.

Irrigation.—Features affecting the suitability of the soils for irrigation are slope, depth of soil, available water capacity, presence of coarse fragments on the surface, infiltration, and permeability. Irrigation is not widely practiced within the county, even though many areas are well suited to irrigation.

Terraces, diversions, and waterways.—Features affecting the suitability of the soils for terraces, diversions, and waterways are thickness of the surface layer, shallow root zone, shallow soil, steep slopes, slow infiltration and permeability, and a high erosion hazard. Terracing is not widely practiced in the county because of the very complex slope pattern of most of the valley soils.

The soils in the eastern and southern parts of the county, such as Tallapoosa and Tatum, are underlain by slate and phyllite at depths of 10 to 50 inches. The slate has varying degrees of hardness, but most of it can be broken with large earthmoving equipment.

The soils on low stream terraces, such as Sylacauga, Leadvale, Lee, and Melvin soils on first bottoms, and Guthrie and Dowellton soils on poorly drained upland flats, present problems of high water content, perched water tables, and flooding. Soils such as these require extensive study and investigation when their use is anticipated for major construction purposes.

Most of the soils derived from sandstone or quartzite are shallow over bedrock and have many large boulders on the surface that interfere with construction. Deep cuts are difficult to make. These areas are represented by Clymer soils and Rock land-Hector-Townley association, steep.

The soils in the limestone valley, Bodine, Decatur, Dewey, and Fullerton soils, generally make fair to good construction material. If sound engineering procedures and good construction practices are followed, no serious problems should arise in the use of these soils for engineering purposes.

Use of the Soils in Town and Country Planning

This section was prepared chiefly for planners, developers, builders, zoning officials, realtors, private and potential landowners, and others interested in the use of the soils in Talladega County for town and country planning. The population of Talladega County is increasing steadily and many areas once used for farming are being utilized for other uses such as housing developments, schools, parks, and other recreational developments.

In selecting a site for a home, an industry, a recreational use, or other purpose, the limitations of the soils in each site for such use must be determined. Some of the more common properties affecting the use of the soils for town and country planning are soil texture, reaction, and depth; shrink-swell potential; steepness of slopes; permeability; depth to hard rock and to the water table; and hazard of flooding. On the basis of these and related characteristics, soil scientists and engineers have rated the soils of Talladega County for specific purposes. The ratings and the nature of the soil limitations that influenced the ratings are shown in table 8. These ratings are predictions based on results, research, and experience of users.

The ratings used are *slight*, *moderate*, and *severe* and they are applied as the soils occur naturally. If the rating is *slight*, the soils have properties favorable for the rated use. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected from these soils. A rating of *moderate* means that the soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with planning, design, or special maintenance. A rating of *severe* means that the soils have one or more properties unfavorable for the rated use. Limitations are difficult and costly to modify or overcome. They require major soil reclamation, special design, or intense maintenance.

In the paragraphs that follow, each specific use is defined and the properties important in rating the limitations of the soils for such use are given. The information can be used with table 7, with information in other parts of the survey, and with the soil map at the back of the survey, as a guide in planning the use of the soils for town and country planning. Before beginning most con-

struction projects, however, an investigation should be made at the site being considered.

Building sites for residences.—These areas are used for homes. The ratings and limitations in table 8 are for houses that are no more than three stories high (fig. 18). The soil properties most important in rating the soils are bearing strength, shrink-swell potential, wetness, flooding, slope, depth to hard rock, stoniness, and rockiness. The type of sewage system is not considered in the evaluation for residences.

Building structures for light industries.—These structures are used for stores, offices, and small industries. They are not more than three stories high. Soil properties important in rating the soils for this use are wetness, flooding, bearing strength, shrink-swell potential, slope and depth to bedrock, stoniness, rockiness, and corrosivity of uncoated steel. Sewage disposal facilities are not considered in the rating.

Sewage lagoons.—A sewage lagoon is a shallow pond constructed to hold sewage within a depth of 2 to 5 feet for the time required for the bacterial decomposition of solids (fig. 19). The lagoon consists of a nearly level floor and an embankment or dike that forms the sides of the pond. The soil properties most important in rating the soils for this use are permeability; depth to bedrock; slope; reservoir site material (Unified grouping); coarse fragments under 6 inches in diameter, by volume; percent of surface area covered by coarse fragments over 6 inches in diameter; and organic matter.

Sanitary land fills.—A sanitary land fill is an area used to dispose of household trash and garbage by burying it in the soil. The soil properties most important in constructing and operating such a system are depth to hardrock, depth to seasonal high water table, slope, dominant texture of soil profile, stoniness, and flooding hazard.

Septic tank filter fields.—Septic tank filter fields are the subsurface tile systems that distribute effluent from a septic tank into the natural soil. The tile system is laid at least 18 inches deep. Soil properties most important in rating soils for this use are permeability, depth to water table, percolation rate, depth to rock, flooding hazard, and slope.

Cemetery sites.—These areas are used for underground burial and range from one-half acre to more than 10 acres. The soil properties most important in rating the soils for such use are depth to seasonal high water table, slope, permeability, depth to bedrock, surface rockiness, surface stoniness, surface soil texture, and flood hazard.

Picnic areas.—This land use refers to park-type picnic areas. These areas are subject to heavy foot traffic, but most vehicular traffic is confined to access roads. Preparation of an area consists of leveling sites for tables and fireplaces and building access roads. Soil properties important in affecting this use are wetness, flooding, slope, surface soil texture, coarse fragments on the surface, stoniness, and rockiness.

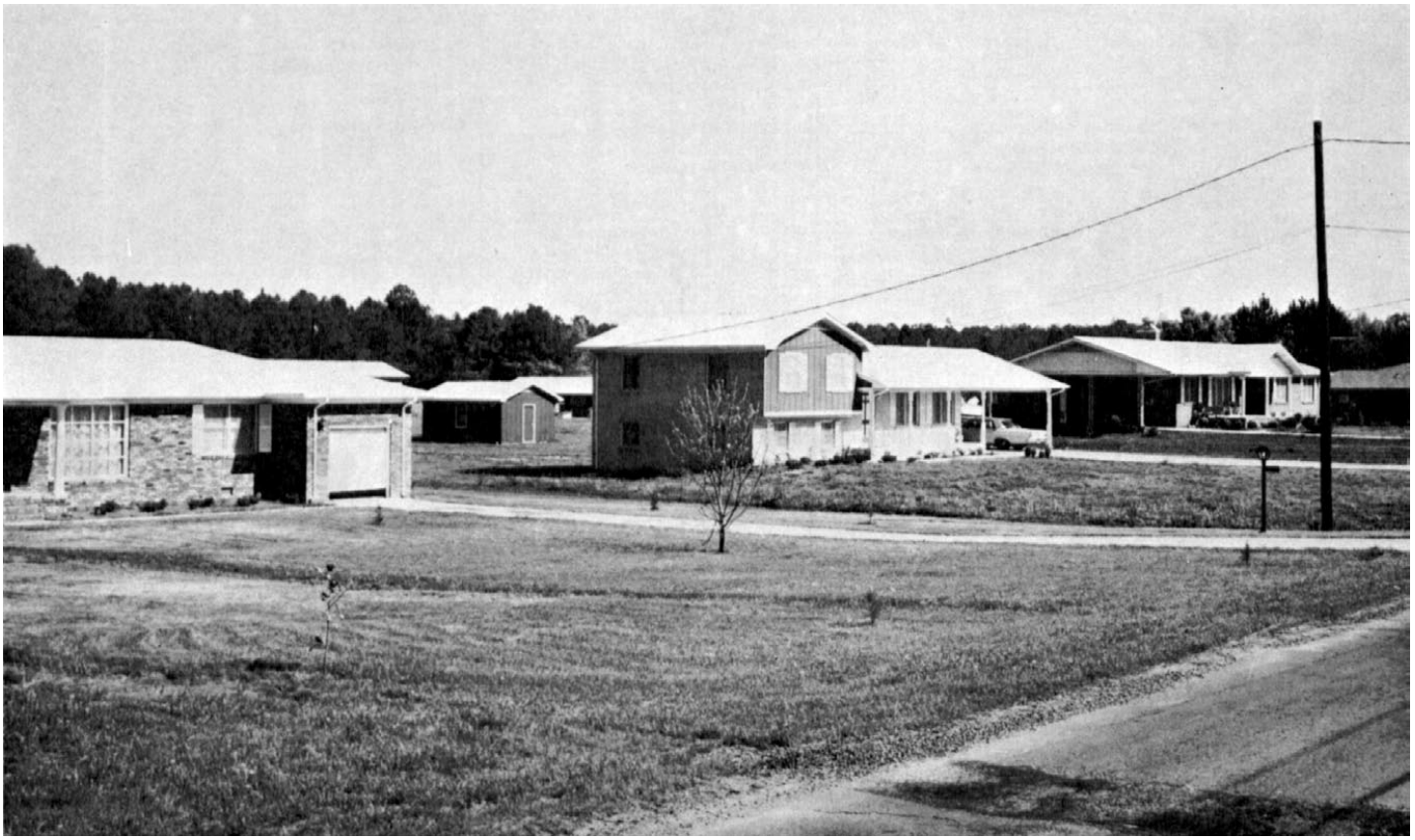


***Figure 18.*—Housing development on Decatur silt loam, 2 to 6 percent slopes.**

TABLE 8.—*Soil limitations for*

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils for referring to other series that appear

Soil and map symbols	Residences	Light industries	Sewage lagoons	Sanitary land fills	Septic tank filter fields
Allen:					
AcC	Moderate: cobblestones on surface.	Slight to severe: slope.	Moderate to severe: moderate permeability; slope.	Slight to moderate: slope.	Slight to moderate: slope.
AgB	Slight	Slight to moderate: slope.	Moderate: moderate permeability; slope.	Slight	Slight
AgC	Moderate: slope	Moderate to severe: slope.	Severe: slope	Moderate: slope	Moderate: slope
AgD	Moderate: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
AlB2	Slight	Slight to moderate: slope.	Moderate: moderate permeability; slope.	Slight	Slight
AlD2	Moderate: slope	Moderate to severe: slope.	Severe: slope	Moderate: slope	Moderate to severe: slope.
AnE	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Anniston:					
AsB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: moderate permeability; slope.	Severe: texture of profile is clay loam and clay.	Slight
AsD	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Severe: texture of profile is clay loam and clay.	Moderate to severe: slope.
Beason:					
Be	Severe: flooding; wetness.	Severe: flooding; wetness.	Moderate: reservoir site material is MH.	Severe: flooding; high water table.	Severe: flooding; high water table.
Bodine:					
BhB	Slight	Slight to moderate: slope.	Severe: moderately rapid permeability.	Slight	Slight
BhD	Moderate: slope	Moderate to severe: slope.	Severe: slope; moderately rapid permeability.	Moderate: slope	Moderate to severe: slope.
BmE	Severe: slope	Severe: slope	Severe: slope; moderately rapid permeability.	Severe: slope	Severe: slope
Bremo:					
BrC	Severe: slope; depth to rock.	Severe: slope; depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.
Cane:					
CbB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: slope	Slight	Moderate to severe: high water table; permeability slow in fragipan.

town and country planning

in such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions in the first column of this table]

Cemeteries	Picnic areas	Intensive play areas	Golf fairways	Paths and trails	Campsites
Severe: cobbly fine sandy loam surface layer.	Severe: coarse fragments on surface.	Severe: coarse fragments on surface.	Severe: coarse fragments on surface.	Severe: coarse fragments on surface.	Moderate to severe: coarse fragments on surface.
Slight	Slight	Moderate: slope; coarse fragments on surface.	Slight	Slight	Slight.
Moderate: slope	Slight to moderate: slope.	Severe: slope	Moderate: slope	Slight	Slight to moderate: slope.
Severe: slope	Moderate: slope	Severe: slope	Moderate to severe: slope.	Slight	Moderate: slope.
Slight	Moderate: surface texture is gravelly sandy clay loam.	Moderate: slope; surface texture is gravelly sandy clay loam.	Moderate: surface texture is gravelly sandy clay loam.	Moderate: surface texture is gravelly sandy clay loam.	Moderate: surface texture is gravelly sandy clay loam.
Moderate: slope	Moderate: slope; surface soil texture is gravelly clay loam.	Severe: slope	Moderate: slope; surface texture is gravelly sandy clay loam.	Moderate: surface texture is gravelly sandy clay loam.	Moderate: slope; surface texture is gravelly sandy clay loam.
Severe: slope	Severe: slope	Severe: slope	Severe: slope	Moderate to severe: slope.	Severe: slope.
Slight	Slight	Moderate: slope	Slight	Slight	Slight.
Moderate to severe: slope.	Slight to moderate: slope.	Severe: slope	Moderate to severe: slope.	Slight	Slight to moderate: slope.
Severe: flooding; high water table.	Moderate: wetness; flooding.	Severe: wetness; flooding.	Severe: flooding	Moderate: wetness; flooding.	Moderate: wetness; flooding; slow permeability.
Slight	Moderate: coarse fragments on surface.	Severe: coarse fragments on surface.	Moderate: coarse fragments on surface.	Moderate: coarse fragments on surface.	Slight to moderate: coarse fragments on surface.
Moderate to severe: slope.	Moderate: slope; coarse fragments on surface.	Severe: slope; coarse fragments on surface.	Moderate: slope; coarse fragments on surface.	Moderate: coarse fragments on surface.	Moderate: slope; coarse fragments on surface.
Severe: slope	Severe: slope	Severe: slope; coarse fragments on surface.	Severe: slope	Moderate to severe: slope.	Severe: slope.
Severe: depth to rock.	Moderate: coarse fragments on surface; slope.	Severe: depth to bedrock.	Severe: depth to rock.	Moderate: coarse fragments on surface.	Slight to moderate: slope; coarse fragments on surface.
Moderate: high water table.	Slight	Moderate: slope	Slight	Slight	Slight.

TABLE 8.—*Soil limitations for*

Soil and map symbols	Residences	Light industries	Sewage lagoons	Sanitary land fills	Septic tank filter fields
Chenneby. Mapped only with Chewacla soils.					
Chewacla: Cc	Severe: flooding	Severe: flooding	Moderate: moderate permeability; reservoir site material is ML, CL, SM.	Severe: flooding; high water table.	Severe: flooding
Choccolocco: Ch	Severe: flooding	Severe: flooding	Moderate: moderate permeability; reservoir site material is ML.	Severe: flooding	Severe: flooding
Clymer: Cm	Severe: slope	Severe: slope	Severe: slope	Severe: slope; depth to bedrock 24 to 42 inches.	Severe: slope
Decatur: DcA	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: moderate permeability.	Severe: dominant texture of profile is clay.	Slight
DdB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: moderate permeability; slope.	Severe: dominant texture of profile is clay.	Slight
DeC2	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Moderate to severe: slope.	Severe: dominant texture of profile is clay.	Moderate: slope
DeE3	Moderate to severe: slope.	Severe: slope	Severe: slope	Severe: slope; dominant texture of profile is clay.	Severe: slope
Dewey: DlB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: moderate permeability; slope.	Severe: dominant texture of profile is clay loam or or clay.	Slight
DmB2	Moderate: moderate bearing strength.	Moderate: moderate bearing strentth.	Moderate: moderate permeability; slope.	Severe: dominant texture of profile is clay loam or clay.	Slight
DmC2	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Severe: dominant texture of profile is clay loam or clay.	Moderate: slope
DmE3	Moderate to severe: slope.	Severe: slope	Severe: slope	Severe: slope; dominant texture of profile is clay loam or clay.	Severe: slope
Dowellton: Do	Severe: flooding; wetness; high shrink-swell potential.	Severe: flooding; wetness; high shrink-swell potential.	Slight	Severe: flooding; high water table.	Severe: flooding; slow permeability; high water table.

town and country planning—Continued

Cemeteries	Picnic areas	Intensive play areas	Golf fairways	Paths and trails	Campsites
Severe: flooding	Moderate: flooding.	Severe: flooding	Severe: flooding	Moderate: flooding.	Severe: flooding.
Severe: flooding	Slight	Slight	Moderate: flooding.	Slight	Slight.
Severe: slope; surface stoniness and rockiness.	Severe: slope; stoniness and rockiness.	Severe: slope; stoniness and rockiness.	Severe: slope	Severe: slope	Severe: slope.
Slight	Slight	Slight	Slight	Slight	Slight.
Slight	Slight	Moderate: slope	Slight	Slight	Slight.
Slight to moderate: slope.	Moderate: silty clay loam surface texture; slope.	Moderate to severe: slope.	Moderate: slope; silty clay loam surface texture.	Moderate: silty clay loam surface texture.	Slight to moderate: slope; silty clay loam surface texture.
Severe: slope	Moderate to severe: slope.	Severe: slope	Severe: slope	Moderate: slope; silty clay loam surface texture.	Moderate to severe: slope.
Slight	Slight	Moderate: slope	Slight	Slight	Slight.
Slight	Moderate: clay loam surface texture.	Moderate: slope; clay loam; surface texture.	Moderate: surface texture is clay loam.	Moderate: clay loam surface texture.	Moderate: clay loam surface texture.
Moderate: slope	Moderate: slope; clay loam surface texture.	Severe: slope	Moderate: slope; clay loam surface texture.	Moderate: clay loam surface texture.	Moderate: slope; clay loam surface texture.
Severe: slope	Moderate to severe: slope.	Severe: slope	Moderate to severe: slope.	Moderate: slope; clay loam surface texture.	Moderate to severe: slope.
Severe: flooding; high water table.	Severe: wetness; flooding.	Severe: wetness; flooding.	Severe: flooding; high water table.	Severe: wetness; flooding.	Severe: wetness; flooding.

TABLE 8.—*Soil limitations for*

Soil and map symbols	Residences	Light industries	Sewage lagoons	Sanitary land fills	Septic tank filter fields
Enders: EmE	Severe: slope	Severe: slope	Severe: slope	Severe: slope; depth to rock is 1 to 5 feet.	Severe: slope
EtD	Severe: slope; depth to rock is 1 to 5 feet.	Severe: slope; depth to rock is 1 to 5 feet.	Severe: slope; depth to rock is 1 to 5 feet.	Severe: depth to rock is 1 to 5 feet.	Severe: depth to rock is 1 to 5 feet.
Fullerton: FcB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: moderate permeability; slope.	Severe: dominant texture of profile is clay.	Slight
FcC	Moderate: moderate bearing strength; slope.	Moderate to severe: slope.	Severe: slope	Severe: dominant texture of profile is clay.	Moderate: slope
FlD2	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Severe: slope; dominant texture of profile is clay.	Moderate to severe: slope.
Grasmere: Gr	Severe: flooding	Severe: flooding	Moderate: moderate permeability.	Severe: flooding; dominant texture of profile is clay.	Severe: flooding
Guthrie: Gu	Severe: flooding; wetness.	Severe: flooding; wetness.	Slight	Severe: high water table; flooding.	Severe: high water table; flooding; slow permeability.
Holston: HoB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: moderate permeability; slope.	Slight	Slight
HsD	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Moderate: slope	Moderate to severe: slope.
Leadvale: Ld	Severe: flooding	Severe: flooding	Slight	Severe: high water table; flooding.	Severe: flooding; moderately slow permeability in fragipan.
Lee: Le	Severe: flooding; wetness.	Severe: flooding; wetness.	Moderate: moderate permeability.	Severe: flooding; high water table.	Severe: flooding; high water table.
Lobelville: Lm	Severe: flooding	Severe: flooding	Moderate: moderate permeability.	Severe: flooding	Severe: flooding
Locust: LoA	Moderate: wetness; moderate bearing strength.	Moderate: wetness; moderate bearing strength.	Slight	Severe: high water table.	Moderate to severe: high water table; slow permeability in fragipan.
LoB	Moderate: wetness; moderate bearing strength.	Moderate: wetness; moderate bearing strength.	Moderate: slope	Severe: high water table.	Moderate to severe: high water table; slow permeability in fragipan.
LtB	Moderate: wetness; moderate bearing strength.	Moderate: wetness; moderate bearing strength.	Moderate: slope	Severe: high water table; slow permeability in fragipan.	Moderate to severe: high water table.

town and country planning—Continued

Cemeteries	Picnic areas	Intensive play areas	Golf fairways	Paths and trails	Campsites
Severe: slope; depth to rock is 1 to 5 feet.	Severe: slope	Severe: slope; depth to bedrock is 1 to 5 feet.	Severe: slope; depth to rock is 1 to 5 feet.	Severe: slope	Severe: slope.
Severe: depth to rock is 1 to 5 feet.	Slight to moderate: slope.	Severe: slope; depth to bedrock is 1 to 5 feet.	Severe: depth to rock is 1 to 5 feet; slope over 12 percent.	Slight	Slight to moderate: slope.
Slight	Moderate: coarse fragments on surface.	Moderate to severe: coarse fragments on surface.	Slight	Slight to moderate: coarse fragments on surface.	Slight to moderate: coarse fragments on surface.
Moderate: slope	Moderate: coarse fragments on surface.	Severe: slope; coarse fragments on surface.	Moderate: slope	Slight to moderate: coarse fragments on surface.	Moderate: coarse fragments on surface.
Moderate to severe: slope.	Moderate: slope; cherty silty clay loam surface texture; coarse fragments on surface.	Severe: slope; coarse fragments on surface.	Moderate: slope; cherty silty clay loam surface texture.	Moderate: cherty silty clay loam surface texture.	Moderate: cherty silty clay loam surface texture; coarse fragments on surface.
Severe: flooding	Severe: silty clay surface texture.	Severe: silty clay surface texture.	Severe: silty clay surface texture.	Severe: silty clay surface texture.	Severe: silty clay surface texture.
Severe: high water table; flooding.	Severe: wetness; flooding.	Severe: wetness; flooding.	Severe: flooding; high water table.	Severe: wetness	Severe: wetness; flooding.
Slight	Slight	Moderate: slope	Slight	Slight	Slight.
Moderate to severe: slope.	Slight to moderate: slope.	Severe: slope	Moderate: slope	Slight	Slight to moderate: slope.
Severe: high water table; flooding.	Slight	Moderate: wetness	Moderate: flooding	Slight	Slight.
Severe: flooding; high water table.	Severe: wetness; flooding.	Severe: wetness; flooding.	Severe: flooding; high water table.	Severe: wetness	Severe: wetness; flooding.
Severe: flooding	Moderate: flooding	Moderate: wetness; flooding.	Severe: flooding	Moderate: flooding	Severe: flooding.
Moderate: high water table.	Slight	Slight to moderate: wetness.	Slight to moderate: high water table.	Slight	Moderate: wetness.
Moderate: high water table.	Slight	Moderate: slope	Slight to moderate: high water table.	Slight	Slight.
Moderate: high water table.	Moderate: coarse fragments on surface.	Moderate: slope; coarse fragments on surface.	Slight to moderate: high water table; coarse fragments on surface.	Slight to moderate: coarse fragments on surface.	Moderate: coarse fragments on surface.

TABLE 8.—*Soil limitations for*

Soil and map symbols	Residences	Light industries	Sewage lagoons	Sanitary land fills	Septic tank filter fields
Masada: MaB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: slope; moderate permeability.	Severe: depth to rock is 3 to 5 feet.	Moderate to severe: slope; depth to rock is 3 to 5 feet.
McQueen: McA	Severe: flooding	Severe: flooding	Moderate: moderate permeability.	Severe: flooding	Severe: flooding
McB	Severe: flooding	Severe: flooding	Moderate: moderate permeability; slope.	Severe: flooding	Severe: flooding
Melvin: Me	Severe: flooding; wetness.	Severe: flooding; wetness.	Slight	Severe: flooding; high water table.	Severe: flooding; high water table; moderately slow permeability.
*Minvale: MnB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: slope; moderate permeability.	Slight	Slight
MnC	Moderate: moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Moderate: slope	Moderate: slope
MoE For Bodine part of MoE, see Bodine series.	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
*Rock land: RhE For Townley part of RhE, see Townley series.	Severe: slope	Severe: slope	Severe: slope	Severe: slope; depth to rock is 0 to 36 inches.	Severe: slope
Slickens: Sk. Variable. On-site investigation is needed.					
Sylacauga: Sy	Severe: flooding; wetness.	Severe: flooding; wetness.	Slight	Severe: flooding; high water table.	Severe: flooding; high water table; slow permeability.
Talladega: TaF	Severe: slope	Severe: slope	Severe: slope	Severe: slope; depth to rock is 0 to 36 inches.	Severe: slope
*Tallapoosa: TcD For Tatum part, see Tatum series.	Severe: slope; depth to rock is 1 to 4 feet.	Severe: slope; depth to rock is 1 to 4 feet.	Severe: slope	Severe: depth to rock is 1 to 4 feet.	Severe: slope; depth to rock is 1 to 4 feet.
ThE For Tatum part, see Tatum series.	Severe: slope	Severe: slope	Severe: slope	Severe: slope; depth to rock is 1 to 4 feet.	Severe: slope

town and country planning—Continued

Cemeteries	Picnic areas	Intensive play areas	Golf fairways	Paths and trails	Campsites
Slight to moderate: depth to rock is 3 to 5 feet.	Slight	Moderate to severe: slope.	Slight	Slight	Slight.
Severe: flooding	Slight	Slight	Moderate: flooding	Slight	Slight.
Severe: flooding	Slight	Moderate: slope	Moderate: flooding	Slight	Slight.
Severe: flooding; high water table.	Severe: wetness; flooding.	Severe; wetness; flooding.	Severe: flooding; high water table.	Severe: wetness	Severe: flooding; wetness.
Slight	Slight to moderate: coarse fragments on surface.	Moderate: slope; coarse fragments on surface.	Slight	Slight to moderate: coarse fragments on surface.	Slight to moderate: coarse fragments on surface.
Moderate: slope	Slight to moderate: slope; coarse fragments on surface.	Severe: slope	Moderate: slope	Slight to moderate: coarse fragments on surface.	Slight to moderate: slope; coarse fragments on surface.
Severe: slope	Moderate to severe: slope.	Severe: slope	Severe: slope	Moderate to severe: slope.	Moderate to severe: slope.
Severe: slope; depth to rock is 0 to 36 inches; surface stoniness.	Severe: slope; rockiness.	Severe: slope; rockiness.	Severe: slope	Severe: slope	Severe: slope.
Severe: flooding; high water table.	Moderate: wetness	Moderate: wetness; flooding.	Severe: flooding; high water table.	Moderate: wetness	Severe: flooding; wetness.
Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope.
Moderate to severe: slope; depth to rock is 1 to 4 feet.	Slight to moderate: slope.	Severe: slope; depth to rock is 1 to 4 feet.	Moderate: slope	Slight	Slight to moderate: slope.
Severe: slope	Severe: slope	Severe: slope; depth to rock is 1 to 4 feet.	Severe: slope	Moderate to severe: slope.	Severe: slope.

TABLE 8.—*Soil limitations for*

Soil and map symbols	Residences	Light industries	Sewage lagoons	Sanitary land fills	Septic tank filter fields
Tatum:					
TmB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: slope; moderate permeability.	Severe: depth to rock is 2.5 to 4.0 feet.	Moderate to severe: depth to rock is 2.5 to 4.0 feet.
TmC	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Severe: depth to rock is 2.5 to 4.0 feet.	Moderate to severe: slope; depth to rock is 2.5 to 4.0 feet.
Toccoa:					
To	Severe: flooding	Severe: flooding	Moderate: moderate permeability.	Severe: flooding	Severe: flooding
Townley:					
TrB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Severe: depth to rock is 24 to 36 inches.	Severe: depth to rock is 24 to 36 inches.	Severe: depth to rock is 24 to 36 inches.
TrC	Severe: slope; depth to rock is 24 to 36 inches.	Severe: slope; depth to rock is 24 to 36 inches.	Severe: slope; depth to rock is 24 to 36 inches.	Severe: depth to rock is 24 to 36 inches.	Severe: depth to rock is 24 to 36 inches.
TsE	Severe: slope	Severe: slope	Severe: slope	Severe: slope; depth to rock is 24 to 36 inches.	Severe: slope; depth to rock is 24 to 36 inches.
TtC2	Severe: slope; depth to rock is 24 to 48 inches.	Severe: slope; depth to rock is 24 to 48 inches.	Severe: slope; depth to rock is 24 to 48 inches.	Severe: depth to rock is 24 to 48 inches.	Severe: depth to rock is 24 to 48 inches.
*Urban land: Ud. Variable. On-site investigation is needed. For Decatur part, see Decatur series.					
Wickham:					
WcA	Severe: flooding	Severe: flooding	Moderate: moderate permeability.	Severe: flooding	Severe: flooding
WcB	Severe: flooding	Severe: flooding	Moderate: slope; moderate permeability.	Severe: flooding	Severe: flooding
WkB	Moderate: moderate bearing strength.	Moderate: moderate bearing strength.	Moderate: slope; moderate permeability.	Severe: depth to rock is 3 to 5 feet.	Moderate: depth to rock is 3 to 5 feet.
WkC	Moderate: slope; moderate bearing strength.	Moderate to severe: slope.	Severe: slope	Severe: depth to rock is 3 to 5 feet.	Moderate: slope; depth to rock is 3 to 5 feet.

town and country planning—Continued

Cemeteries	Picnic areas	Intensive play areas	Golf fairways	Paths and trails	Campsites
Moderate: depth to rock is 2.5 to 4.0 feet.	Slight	Moderate: slope	Slight	Slight	Slight.
Moderate: slope; depth to rock is 2.5 to 4.0 feet.	Slight to moderate: slope.	Severe: slope	Moderate: slope	Slight	Slight to moderate: slope.
Severe: flooding	Moderate to severe: flooding.	Moderate to severe: flooding.	Severe: flooding	Moderate: flooding	Severe: flooding.
Severe: depth to rock is 24 to 36 inches.	Slight	Moderate: slope; depth to rock is 24 to 36 inches.	Moderate: depth to rock is 24 to 36 inches.	Slight	Moderate: slow permeability.
Severe: depth to rock is 24 to 36 inches.	Slight to moderate: slope.	Severe: slope	Moderate: slope; depth to rock is 24 to 36 inches.	Slight	Moderate: slope; slow permeability.
Severe: slope; depth to rock is 24 to 36 inches.	Severe: slope	Severe: slope	Severe: slope	Moderate to severe: slope.	Severe: slope.
Severe: depth to rock is 24 to 48 inches.	Moderate; slope; silty clay loam surface texture.	Severe: slope	Moderate: slope; slaty silty clay surface texture.	Moderate: slaty silty clay loam surface texture.	Moderate: slaty silty clay loam surface texture.
Severe: flooding	Slight	Slight	Slight to moderate: flooding.	Slight	Slight.
Severe: flooding	Slight	Moderate: slope	Slight to moderate: flooding.	Slight	Slight.
Slight to moderate: depth to rock is 3 to 5 feet.	Slight	Moderate: slope	Slight	Slight	Slight.
Moderate: slope; depth to rock is 3 to 5 feet.	Moderate: slope	Severe: slope	Moderate: slope	Slight	Slight to moderate: slope.

Figure 19.—Sewage lagoon on Dowellton silt loam and Beason silt loam.

Intensive play areas.—Such areas are used intensively for baseball, football, badminton, and other organized games. These areas are subject to intensive foot traffic. Properties that affect the use of the soil for playgrounds are wetness, flooding, permeability, slope, surface soil texture, depth to bedrock, coarse fragments on the surface, stoniness, and rockiness.

Golf fairways.—Soils are rated in terms of limitations for areas that will require moderate trafficability. Properties important in rating the soils for this use are depth to seasonal high water table, slope, depth to bedrock, surface rockiness, surface stoniness, surface soil texture, and flood hazard.

Paths and trails.—This use applies to soils to be used for local and cross-country foot paths and trails and for bridle paths. Soil properties important in rating this use are wetness, flooding, slope, surface soil texture, coarse fragments on the surface, and rockiness or stoniness.

Camp areas.—Such areas are used intensively for tents and small camp trailers and the accompanying activities of outdoor living. Little site preparation is normally required other than shaping and leveling for tent and parking areas. These areas are subject to heavy foot traffic and limited vehicular traffic. Soil properties important in rating the soils for camp areas are wetness, flooding, permeability, slope, surface soil texture, coarse fragments on the surface, stoniness, and rockiness.

Formation and Classification of the Soils

This section describes the major factors of soil formation and tells how these factors have affected the soils of Talladega County. It also defines the current system for classifying soils.

Formation of the Soils

Soil is a natural, three-dimensional body on the earth's surface that supports plants and that has properties resulting from the interaction of the five major factors of soil formation. It is produced when parent material, climate, relief, and living organisms (plants and animals) interact for a period of time. These soil-forming factors determine the nature of the soil that forms at any point on the earth. The relative importance of each differs from place to place; sometimes one factor is more important and sometimes another. When a factor is varied, a different soil is formed.

Climate and living organisms are the active factors of soil formation. They act on parent material and change it to a natural body with definite characteristics. The effects of climate and living organisms are conditioned by the relief. Relief affects surface drainage, the amount of water that percolates through the soil, the rate of erosion, and the kind of vegetation that grows on the soil. The nature of the parent material also affects the kind of soil profile that is formed. Time is needed for changing the parent material into a soil. Normally, a long period of time is required for the development of a distinct soil horizon.

Parent material

Parent material is the unconsolidated mass from which a soil forms. It is largely responsible for the chemical and mineralogical composition of soils, which often determine the effectiveness of the weathering and in some instances partly control the kind of vegetation that grows. The parent material of the soils in Talladega County is of two kinds: (1) residual material weathered from rocks in place, and (2) material transported by water or gravity and laid down as unconsolidated deposits of sand, silt, and clay.

The soils in the eastern and southern parts of the county formed in material weathered from slate or phyllite (*1*). These soils are on very narrow ridgetops and steep slopes. Depth to rock ranges from about 10 to 50 inches. Also in the eastern part of the county is Clymer soil, which formed in material weathered from thick sandstone or quartzite; depth to sandstone is 24 to 42 inches. Bremo soils formed in residuum from a chloritic schist; depth to schist is 12 to 24 inches.

In a small area in the northwestern and southwestern parts of the county the Townley soils formed in residuum from shale or interbedded shale and sandstone. The soils from a large area in the western two-thirds of the county formed in residuum from limestone. The soils range from dark red, relatively free of chert, to yellowish brown with many chert fragments on the surface and in the profile. The soils on the upper part of the mountains formed from quartzite interbedded with shale, and the lower slopes are colluvial from this material.

The soils on stream terraces and first bottoms formed in material transported by water and laid down as unconsolidated deposits of sand, silt, or slay. Some of this material came from nearby uplands, and some came from a great distance. This alluvial material is variable in texture and reaction. Thus, soils formed in alluvium range from sand to clay in texture and from acid to alkaline in reaction.

Climate

Climate affects the formation of soils through its influence on the rate of weathering of rocks and on the decomposition of minerals and organic matter. It also affects biological activity in the soils and the leaching and movement of weathered minerals. Temperature and rainfall, particularly their seasonal distribution, are the significant climatic factors in soil formation.

The climate in Talladega County is temperate, and there is a wide range in seasonal temperature. The temperature in January averages about 45°F., and the temperature in August averages about 79°. There is abundant rainfall, about 52.4 inches per year, usually well distributed throughout the year, but short dry spells in summer are not uncommon. Summers are long and hot, and winters are relatively mild. The climate is fairly uniform throughout the county; therefore the differences in the soils in the county are not due to climate.

The warm moist climate promotes the rapid decay of plant remains; thus, the organic-matter content in most of the soils in Talladega County is low. The decay of plant remains also produces organic acids, which aid in the breakdown of minerals and the release of bases. The large amount of water percolating through the soil moves these bases down and out of the soil thus making the soils generally low in bases.

Relief

The relief of the county is determined largely by the underlying bedrock, the geologic history of the region, and the effects of dissection by streams. Relief influences the formation of soils through its effect on moisture relations, erosion, temperature, and the cover of growing plants. Relief is a significant modifier of climatic effects and a major factor in local areas. As slope increases, the hazard of erosion becomes greater, there is more runoff, less water soaks into the soil, and there is less leaching.

The slopes in Talladega County range from 0 to 70 percent. In the steeper areas the effects of relief tend to cause geologic removal of the soil material a little faster than on the gentler slopes, so the soils in the same series, such as Townley, on the steep hillsides are not quite as thick as those on the smoother ridgetops. Also, relief has affected the soils on the low stream terraces. For example, Choccolocco and Sylacauga soils formed in similar parent material. Choccolocco soils are on the crests of the low ridges, are well drained, and have yellowish-brown subsoils. In contrast, Sylacauga soils are in the low areas and are level, somewhat poorly drained soils that have gray mottling in the upper part of the subsoil and have a seasonal high water table.

Living organisms

Plants, animals, bacteria, and other organisms are active in the formation of soil. The kinds and numbers of plants and animals that live on and in the soil are determined largely by the climate, but to some extent by the kinds of parent material, relief, and by the age of the soil.

Micro-organisms are indispensable to the development of soils. Bacteria, fungi, and other micro-organisms aid in weathering rock and in decomposing organic matter. The larger plants serve to alter the microclimate of the soils, to supply organic matter, and to transfer elements

from the subsoil to the surface layer. Not much is known about the micro-organisms in the soil in this county except that their activity is confined to the top few inches of the soil.

The native vegetation in the county was deciduous forest, which stimulated leaching and accelerated the development of soils. The main trees on the uplands were oak, hickory, and pine. On the well-drained bottom lands, the dominant trees were birch, ash, various kinds of oaks, loblolly pine, hackberry, and sycamore. The common trees on the poorly drained bottom lands were sweetgum, red maple, willow, water oak, blackgum, and swamp red oak.

Growing plants provide a cover that helps to reduce erosion and to stabilize the surface so that the soil-forming processes can continue. Leaves, twigs, roots, and entire plants accumulate on the surface of forest soils and then decompose as the result of the action of percolating water and of micro-organisms, earthworms, and other forms of life. This material is mixed into the soil and helps to maintain granular structure and good tilth.

In man's agricultural endeavors, he effectively modifies the vegetational environment of the soil by cutting the trees, plowing the soil, using fertilizer, and harvesting the crops. As man changes the cover of growing plants, erosion is accelerated. This, in turn, can modify the texture of the surface layer and change the tilth of the soil and thereby alter the soil-forming processes.

Time

Time is required for the formation of soils that have distinct horizons. The length of time needed for the development of a profile depends on many other factors, one of which is the kind of parent material. Fine-textured parent material develops into a soil more slowly than coarse-textured parent material. Generally less time is needed for a soil to develop in a humid, warm region where the vegetation is luxuriant than in a dry or cold region where the vegetation is scanty. Most of the soils on uplands in Talladega County have been in place long enough for distinct horizons to develop.

The soils in Talladega County range from young soils that have little or no profile development to old soils that have a well-developed profile. The young soils are on the first bottoms. Toccoa soils are examples of young soils. They formed in alluvium that has been in place for only a short time, and the soil-forming factors have not changed it enough to form a profile that has well-defined genetically related horizons. Wickham soils are an example of older soils, as they have a well-developed profile that has genetically related horizons. They are presumed to have formed in parent material similar to that of Toccoa, but they have a leached A horizon and a clay-enriched sandy clay loam B horizon. The soil material in their profile bears little resemblance to the presumed original parent material.

Classification of the Soils

Classification consists of an orderly grouping of soils according to a system designed to make it easier to remember soil characteristics and interrelationships. Classification is useful in organizing and applying the results of experience and research. Soils are placed in narrow classes for discussion in detailed soil surveys and for application of knowledge within farms and fields. The many thousands of narrow classes are then grouped into progressively fewer and broader classes in successively higher categories, so that information can be applied to large geographic areas.

Two systems of classifying soils have been used in the United States in recent years. The older system was adopted in 1938 (*3*) and revised later (*8*). The system currently used by the National Cooperative Soil Survey was developed in the early sixties (*7*) and was adopted in 1965 (*11*). It is under continual study.

The current system of classification has six categories. Beginning with the most inclusive, these categories are the order, the suborder, the great group, the subgroup, the family, and the series. The criteria for classification are soil properties that are observable or measurable, but the properties are selected so that soils of similar genesis are grouped together. The placement of some soil series in the current system of classification, particularly in families, may change as more precise information becomes available.

Table 9 shows the classification of each soil series of Talladega County by family, subgroup, and order, according to the current system.

Following are brief descriptions of each of the categories in the current system.

Order.—Ten soil orders are recognized in the current system. They are Entisols, Vertisols, Inceptisols, Aridisols, Mollisols, Spodosols, Alfisols, Ultisols, Oxisols, and Histosols. The properties used to differentiate the soil orders are those that tend to give broad climatic groupings of soils. Two exceptions are Entisols and Histosols, which occur in many different climates.

The four orders to which the soils in Talladega County belong are Alfisols, Entisols, Inceptisols, and Ultisols.

Alfisols have a light-colored surface layer, a clay-enriched B horizon, an accumulation of aluminum and iron, and a base saturation of more than 35 percent.

Entisols are mineral soils that formed either in recent alluvium or in older material consisting of almost pure quartz sand. They have little, if any, horizon development.

Inceptisols are mineral soils that formed in young but not recent material. They lack well-defined horizons. They have a slight accumulation of organic matter in the surface layer and weak subangular blocky structure in the B2 horizon.

Ultisols are mineral soils that have a horizon of clay accumulation and a base saturation lower than 35 percent.

Suborder.—Each order is divided into suborders, primarily on the basis of soil characteristics that produce classes having genetic similarity. A suborder has a narrower climatic range than an order. The criteria for suborders reflect either the presence or absence of water-logging or differences in climate or vegetation.

Great Group.—Each suborder is divided into great groups on the basis of uniformity in the kind and sequence of genetic horizons.

Subgroup.—Each great group is divided into subgroups, one representing the central (typic) segment of the group, and others, called intergrades, made up of soils that have mostly properties of one great group but also one or more properties of another great group.

TABLE 9.—*Soil series classified according to the current system of classification*

Series	Family	Subgroup	Order
Allen	Fine-loamy, siliceous, thermic	Typic Paleudults	Ultisols.
Anniston	Clayey, kaolinitic, thermic	Rhodic Paleudults	Ultisols.
Beason	Clayey, mixed, thermic	Aquic Hapludults	Ultisols.
Bodine [1]	Loamy-skeletal, siliceous, thermic	Typic Paleudults	Ultisols.
Bremo	Loamy-skeletal, mixed, thermic	Typic Dystrochrepts	Inceptisols.
Cane	Fine-loamy, siliceous, thermic	Typic Fragiudults	Ultisols.
Chenneby	Fine-silty, mixed, thermic	Aquic Fluventic Dystrochrepts	Inceptisols.
Chewacla	Fine-loamy, mixed, thermic	Aquic Fluventic Dystrochrepts	Inceptisols.
Choccolocco	Fine-silty, mixed, thermic	Typic Hapludults	Ultisols.
Clymer	Fine-loamy, mixed, mesic	Typic Hapludults	Ultisols.
Decatur	Clayey, kaolinitic, thermic	Rhodic Paleudults	Ultisols.
Dewey	Clayey, kaolinitic, thermic	Typic Paleudults	Ultisols.
Dowellton	Very-fine, mixed, thermic	Vertic Ochraqualfs	Alfisols.
Enders	Clayey, mixed, thermic	Typic Hapludults	Ultisols.
Fullerton	Clayey, kaolinitic, thermic	Typic Paleudults	Ultisols.
Grasmere	Clayey, mixed, thermic	Cumulic Haplumbrepts	Inceptisols.
Guthrie	Fine-silty, siliceous, thermic	Typic Fragiaquults	Ultisols.
Hector	Loamy, siliceous, thermic	Lithic Dystrochrepts	Inceptisols.
Holston	Fine-loamy, siliceous, thermic	Typic Paleudults	Ultisols.
Leadvale	Fine-silty, siliceous, thermic	Typic Fragiudults	Ultisols.
Lee	Fine-loamy, siliceous, acid, thermic	Typic Fluvaquents	Inceptisols.
Lobelville	Fine-loamy, siliceous, thermic	Aquic Fluventic Dystrochrepts	Inceptisols.
Locust	Fine-loamy, mixed, thermic	Ochreptic Fragiudults	Ultisols.
Masada	Fine-loamy, mixed, thermic	Typic Hapludults	Ultisols.
McQueen	Clayey, mixed, thermic	Typic Hapludults	Ultisols.
Melvin [2]	Fine-silty, mixed, nonacid, mesic	Fluventic Haplaquepts	Inceptisols.
Minvale	Fine-loamy, siliceous, thermic	Typic Paleudults	Ultisols.
Montevallo [3]	Loamy-skeletal, mixed, thermic, shallow	Typic Dystrochrepts	Inceptisols.
Rock land	Unclassified.		
Slickens	Unclassified.		
Sylacauga	Fine-silty, mixed, thermic	Aeric Ochraquults	Ultisols.
Talladega [4]	Loamy-skeletal, mixed, mesic	Ruptic-Lithic Entic Hapludults	Ultisols.
Tallapoosa	Loamy-micaceous, thermic, shallow	Ochreptic Hapludults	Ultisols.
Tatum	Clayey, mixed, thermic	Typic Hapludults	Ultisols.
Toccoa	Coarse-loamy, mixed, nonacid, thermic	Typic Udifluvents	Entisols.
Townley	Clayey, mixed, thermic	Typic Hapludults	Ultisols.
Wickham	Fine-loamy, mixed, thermic	Typic Hapludults	Ultisols.

[1] Soils that are less than 35 percent chert are taxadjuncts to the Bodine series. This difference, however does not alter their usefulnes or behavior.

[2] These soils are taxadjuncts to the Melvin series because they have a mean annual soil temperature a few degrees warmer. This difference however, does not alter their usefulness or behavior.

[3] These soils are taxadjuncts to the Montevallo series because the colors are redder. This difference, however, does not alter their usefulness or behavior.

[4] In this county the Talladega soils are a few degrees warmer than normal for the series. This difference, however, does not alter their management or behavior.

Family.—Families are established within each subgroup, primarily on the basis of properties important to plant growth. Some of these properties are texture, mineralogy, reaction, soil temperature, permeability, consistence, and thickness of horizons.

Series.—The series has the narrowest range of characteristics of the categories in the classification system. It is explained in the section "How This Survey Was Made."

A detailed description of each soil series in the county is given in the section "Descriptions of the Soils."

Nomenclature

The nomenclature for the classes in each of the four highest categories is for the most part connotative. The formative elements come chiefly from the classical language. Many of the roots are familiar and thus help us to visualize the soil. For example, the Guthrie series is classified as a Typic Fragiaquult. From the formative elements, one can visualize that Guthrie soils must have a fragipan (fragi), be wet (aqu), and have a clay-enriched B horizon that has low base saturation (ult). Guthrie soils are wet, have a well developed fragipan, and have a clay-enriched B horizon.

The names are distinctive for the classes in each category, so that a name itself will indicate the category to which a given class belongs. Also, the names are designed so that each subgroup can be identified by its name. For example, the name Typic Fragiaquult indicates a class in a subgroup. Furthermore, from the name, one can identify the great group (Fragiaquults), the suborder (Aquults), and the order (Ultisols).

Climate [6]

The climate of Talladega County is temperate, and rainfall is usually well distributed throughout the year. Except for the summer months, the day to day weather is

[6] By C. C. WOODEN, climatologist for Alabama, National Weather Service, U.S. Department of Commerce.

controlled largely by the march of pressure systems and contrasting air masses across the nation. During the summer the climate borders on the subtropical as maritime tropical air prevails along a permanent high pressure system. Temperature and precipitation data are given in table 10.

Spring is the most changeable season of the year, characterized by a wide range of temperature and quite variable rainfall. The vagaries of the spring weather make it difficult to plan farm operations with any degree of certainty. In March, the days are frequently cold, rainy, and windy but by early May the days are usually sunny, warm, and pleasant. Freezing weather occurs at times into mid-April, then daytime readings soar into the 90's in May. March is the wettest month of the year and rainfall decreases in April and May. Dry spells occur frequently in May but moisture is usually adequate for plant growth. The dry spells are usually more beneficial than harmful as needed farm operations can be accomplished without undue delay. Locally heavy thunderstorms and the chance of tornadoes are most likely to occur in the spring.

The summer season is quite long, and warm to hot weather begins in May or June and continues through September and usually well into October. Breaks in the hot weather are few during July and August, and the frequency of afternoon thundershowers is the only phenomena that distinguishes one day from another. Thundershowers provide most of the summer rainfall and occur on the average about 1 day in 3 with a great variation in the amounts of rain. Thundershower activity is more frequent in July making July the most dependable of the summer months for rainfall. Rainfall during July is usually essential if crops, such as corn, are to make the maximum yield. Most summer days have a temperature of 90° F., or higher, and about 70 days each year can be expected to have maximums in the 90's. Maximums of 100°, or higher, are likely during half of the summers, occurring most often during periods of dry weather when the effects of the heat are more harmful to crops.

Fall is a season of transition. The hot, humid weather, which is typical of early September, gives way to mild, sunny, and usually dry days in October. Rainfall is usually light and infrequent, skies are sunny during the day and clear at night; the humidity is low and extremes of temperature are rare. Extended periods without rain occur frequently, resulting occasionally in mild droughts. The dry weather is beneficial and favorable for the harvest of crops, which reaches its peak during this season. The lack of moisture at times hinders the germination and growth of small grains, which are planted early in fall. Prewinter cold spells begin in late October and become more frequent in November. The temperature drops to 32°, or lower, no earlier than the end of October in 1 out of 4 years. Table 11 shows the probabilities of the occurrence of the last low temperature in spring and the first low temperature in fall.

In winter there are frequent shifts and interaction between mild air, which has been warmed and moistened by travel over the Gulf of Mexico, and cold dry air moving southward from Canada. This results in considerable cloudiness and precipitation. Most of the precipitation is in the form of rain with light amounts of snow at infrequent intervals. Measurable rain can be expected on the average of 1 out of 3 days while cloudy skies often prevail 3 or 4 days at a time. Freezing temperatures occur, on the average, about 60 times each year; half of these are in December and January. Severely cold weather with temperatures of 15°, or lower, seldom occurs, and then only for a day or two. Even on the coldest day the temperature rarely fails to go above 32°.

TABLE 10.—*Temperature and precipitation*

[All data based on records from Talladega in period 1938–67]

Month	Temperature				Precipitation			
	Average daily maximum	Average daily minimum	Two years in 10 will have at least 4 days with—		Average monthly total	One year in 10 will have—		Average snowfall
			Maximum temperature equal to or higher than—	Minimum temperature equal to or lower than—		Less than	More than	
	°F.	°F.	°F.	°F.	In.	In.	In.	In.
January	56	34	72	16	4.7	2.3	8.9	0.5
February	60	36	75	20	5.3	2.5	9.3	.1
March	67	42	82	25	6.4	3.5	8.8	.1
April	76	50	87	34	5.1	1.8	8.4	0
May	84	57	93	44	3.5	1.0	6.4	0
June	90	65	97	55	4.5	1.8	6.6	0
July	91	68	98	62	4.8	2.3	8.8	0
August	91	67	99	59	4.1	1.4	7.4	0
September	86	60	97	50	3.4	.6	6.0	0
October	77	49	89	34	2.2	.3	4.3	0
November	66	40	78	25	3.6	.7	6.0	(1)
December	57	34	71	18	4.8	2.3	8.1	.1
Year	75	50	[2] 100	[3] 10	52.4	43.7	62.2	.8

[1] Trace (less than 0.05 inch). [2] Average annual maximum. [3] Average annual minimum.

TABLE 11.—*Probability of last low temperature in spring and first in fall*

[Based on data for Talladega for 30-year period 1931-60]

Probability	Dates for given probability and temperature						
	16° F. or lower	20° F. or lower	24° F. or lower	28° F. or lower	32° F. or lower	36° F. or lower	40° F. or lower
Spring:							
1 year in 10 later than	Feb. 14	Mar. 3	Mar. 23	Apr. 6	Sept. 12	Apr. 20	May 12
1 year in 4 later than	Feb. 1	Feb. 22	Mar. 12	Mar. 31	Apr. 8	Apr. 15	May 4
1 year in 3 later than	Jan. 29	Feb. 17	Mar. 7	Mar. 23	Apr. 5	Apr. 9	May 3
2 years in 3 later than	Jan. 16	Jan. 30	Feb. 20	Mar. 11	Mar. 24	Apr. 8	Apr. 19
3 years in 4 later than	Jan. 15	Jan. 26	Feb. 18	Mar. 7	Mar. 23	Apr. 4	Apr. 13
9 years in 10 later than	Jan. 12	Jan. 13	Feb. 2	Feb. 23	Mar. 9	Mar. 29	Apr. 4
Fall:							
1 year in 10 earlier than	Dec. 3	Dec. 4	Nov. 20	Nov. 4	Oct. 24	Oct. 18	Oct. 9
1 year in 4 earlier than	Dec. 20	Dec. 10	Nov. 26	Nov. 11	Oct. 31	Oct. 24	Oct. 16
1 year in 3 earlier than	Dec. 22	Dec. 13	Nov. 29	Nov. 13	Nov. 5	Oct. 26	Oct. 17
2 years in 3 earlier than	Dec. 24	Dec. 20	Dec. 6	Nov. 25	Nov. 12	Nov. 4	Oct. 26
3 years in 4 earlier than	Dec. 25	Dec. 22	Dec. 9	Nov. 28	Nov. 15	Nov. 6	Oct. 28
9 years in 10 earlier than	Dec. 30	Dec. 29	Dec. 28	Dec. 3	Nov. 26	Nov. 14	Nov. 3

Prevailing winds in Talladega County are northerly, about 9 miles per hour in winter; southerly, about 9 miles per hour in spring; southerly, about 6 miles per hour in summer; and northeasterly, about 6 miles per hour in fall. The average humidity for the year is 74 percent. At noon the average humidity ranges from 52 percent in October to about 65 percent in July and August.

Rainfall is usually the most important weather element in determining the success or failure of a crop year. In most years the amount and timeliness of rain are adequate for good yields. However, wet seasons and droughts of varying intensity do occur. A mild drought that might affect crop yield slightly but not cause a total crop failure is likely for at least 1 month on the average of 2 out of 3 years. Severe droughts that result in almost total crop failure are rare and not likely in more than 1 year out of 15.

General Nature of the County

The water supply is adequate for domestic use in all parts of the county. Most of the small streams dry up late in summer and in fall, but the larger streams run all year. Most of the domestic water on farms comes from dug or drilled wells. The dug wells range in depth from 15 to 70 feet. Some of these in the slate and shale areas may weaken during dry periods late in summer and fall. Drilled wells furnish both domestic and industrial water throughout the county. They range in depth from 130 to more than 1,000 feet; about 200 feet is the average depth. The yield is variable. Ponds have been built on many farms to furnish water for livestock and for fishing. According to information supplied by Talladega County Soil and Water Conservation District, there are about 740 farm ponds in the county.

The Coosa River, which flows south, is the western boundary of the county and it is the largest stream. Some of the larger creeks that flow westward and empty into the Coosa River are: Blue Eye, Choccolocco, Cheaha, Talladega, Tallaseehatchee, and Cedar. Some smaller creeks are Fannin Branch, Clear Creek, and Poorhouse Branch. These also empty into the Coosa River.

The elevations in Talladega County range from approximately 390 feet above sea level along the Coosa River at the Talladega-Coosa county line to 1,919 feet above sea level at Horn Tower. The elevation at the courthouse in Talladega is 573 feet; at Munford it is 650 feet; Lincoln, 500 feet; Childersburg, 440 feet; Sylacauga, 550 feet; and at Kentuck lookout tower, it is 1,180 feet above sea level.

Cotton, soybeans, and corn are the principal crops grown in this county. In recent years the acreage planted to soybeans has increased and the acreage planted to cotton and corn has decreased slightly. Better management practices, greater use of commercial fertilizer, and improved varieties have increased per acre yields each year.

In 1964, the income from the sale of livestock and livestock products made up slightly more than 50 percent of the farm income in the county. There were 25,865 head of cattle and calves on farms in 1964, as compared with 17,632 in 1959.

About 68 percent of the county, or 321,961 acres, is woodland, and large quantities of lumber and pulpwood are sold each year. Included in this acreage is 45,661 acres of woodland owned by the U.S. Forest Service.

In 1964, 39.2 percent of the county, or 188,160 acres, was classified as land in farms. Of this, about 38 percent was classified as cropland and 20 percent was classified as pasture land by the United States Census of Agriculture.

In 1964, 7,156 tons of commercial fertilizer was used on 41,119 acres of cropland, hay land, and pasture land, as compared with 6,658 tons on 38,896 acres in 1959. Also in 1964, 8,627 tons of lime was used on 5,589 acres, as compared with 3,168 tons of lime used on 1,921 acres in 1959.

Of the 1,151 farms in the county in 1964, 707 were operated by full owners, 262 by part owners, 178 by tenants, and 4 by farm managers.

Literature Cited

(1) ADAMS, GEORGE I., BUTTS, CHARLES, STEPHENSON, L. W., and COOKE, WYTHE.
1926. GEOLOGY OF ALABAMA. Ala. Geol. Survey Spec. Rpt. No. 14, 312 pp., illus. [Out of print]

(2) AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS.
1961. STANDARD SPECIFICATIONS FOR HIGHWAY MATERIALS AND METHODS OF SAMPLING AND TESTING. Ed. 8, 2 v., illus.

(3) BALDWIN, MARK, KELLOGG, CHARLES E., and THORP, JAMES.
1938. SOIL CLASSIFICATION. U.S. Dept. Agr. Ybk., pp. 979–1001, illus.

(4) BROADFOOT, W. M.
1960. FIELD GUIDE FOR EVALUATING COTTONWOOD SITES. U.S. Dept. Agr., Forest Serv., Occas. Paper 178, South. Forest Expt. Sta., 6 pp., illus.

(5) ———.
1963. GUIDE FOR EVALUATING WATER OAK SITES. U.S. Dept. Agr., Forest Serv., Res. Paper SO–1, South. Forest Expt. Sta., 8 pp., illus.

(6) SCHNUR, G. LUTHER.
1937. YIELD, STAND, AND VOLUME TABLES FOR EVEN-AGED UPLAND OAK FOREST. U.S. Dept. Agr. Tech. Bul. 560, 88 pp., illus. [Reprinted in 1961]

(7) SIMONSON, ROY W.
1962. SOIL CLASSIFICATION IN THE UNITED STATES. Sci. 137: 1027–1034, illus.

(8) THORP, JAMES and SMITH, GUY D.
1949. HIGHER CATEGORIES OF SOIL CLASSIFICATION: ORDER, SUBORDER, AND GREAT SOIL GROUPS. Soil Sci. 67: 117–126.

(9) UNITED STATES DEPARTMENT OF AGRICULTURE.
1929. VOLUME, YIELDS, AND STAND TABLES FOR SECOND-GROWTH SOUTHERN PINES. Misc. Pub. No. 50, 202 pp. [Out of print]

(10) ———.
1951. SOIL SURVEY MANUAL. U.S. Dept. Agr. Handbook No. 18, 503 pp., illus.

(11) ———.
1960. SOIL CLASSIFICATION, A COMPREHENSIVE SYSTEM, 7TH APPROXIMATION. 265 pp., illus. [Supplements issued in March 1967 and September 1968]

(12) ———.
1970. ALABAMA CONSERVATION NEEDS INVENTORY. 119 pp., illus.

(13) UNITED STATES DEPARTMENT OF DEFENSE.
1968. UNIFIED SOIL CLASSIFICATION SYSTEM FOR ROADS, AIRFIELDS, EMBANKMENTS AND FOUNDATIONS. MIL–STD–619B, 30 pp., illus.

Glossary

Acidity, soil. See Reaction, soil.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates such as crumbs, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali soil. Generally, a highly alkaline soil. Specifically, an alkali soil has so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that the growth of most crop plants is low from this cause.

Alluvium. Soil material, such as sand, silt, or clay, that has been deposited on land by streams.

Available water capacity (also termed available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Colluvium. Soil material, rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrations of compounds, or of soil grains cemented together. The composition of some concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are examples of material commonly found in concretions.

Consistence, soil. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are—

Loose.—Noncoherent when dry or moist; does not hold together in a mass.

Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

Plastic.—When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.

Sticky.—When wet, adheres to other material, and tends to stretch somewhat and pull apart, rather than to pull free from other material.

Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

Soft.—When dry, breaks into powder or individual grains under very slight pressure.

Cemented.—Hard and brittle; little affected by moistening.

Drainage class (natural). Refers to the conditions of frequency and duration of periods of saturation or partial saturation that existed during the development of the soil, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven different classes of natural soil drainage are recognized.

Excessively drained soils are commonly very porous and rapidly permeable and have a low water-holding capacity.

Somewhat excessively drained soils are also very permeable and are free from mottling throughout their profile.

Well-drained soils are nearly free from mottling and are commonly of intermediate texture.

Moderately well drained soils commonly have a slowly permeable layer in or immediately beneath the solum. They have uniform color in the A and upper B horizons and have mottling in the lower B and the C horizons.

Somewhat poorly drained soils are wet for significant periods but not all the time, and in Podzolic soils commonly have mottlings below 6 to 16 inches, in the lower A horizon and in the B and C horizons.

Poorly drained soils are wet for long periods and are light gray and generally mottled from the surface downward, although mottling may be absent or nearly so in some soils.

Very poorly drained soils are wet nearly all the time. They have a dark-gray or black surface layer and are gray or light gray, with or without mottling, in the deeper parts of the profile.

Fertility, soil. The quality of a soil that enables it to provide compounds, in adequate amounts and in proper balance, for the growth of specified plants, when other growth factors such as light, moisture, temperature, and the physical condition of the soil are favorable.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flood plain. Nearly level land, consisting of stream sediments, that borders a stream and is subject to flooding unless protected artificially.

Fragipan. A loamy, brittle, subsurface horizon that is very low in organic matter and clay but is rich in silt or very fine sand. The layer is seemingly cemented. When dry, it is hard or very hard and has a high bulk density in comparison with the horizon or horizons above it. When moist, the fragipan tends to rupture suddenly if pressure is applied, rather than to deform slowly. The layer is generally mottled, is slowly or very slowly permeable to water, and has few or many bleached fracture planes that form polygons. Fragipans are a few inches to several feet thick; they generally occur below the B horizon, 15 to 40 inches below the surface.

Horizon, soil. A layer of soil, approximately parallel to the surface, that has distinct characteristics produced by soil-forming processes. These are the major horizons:

O horizon.—The layer of organic matter on the surface of a mineral soil. This layer consists of decaying plant residues.

A horizon.—The mineral horizon at the surface or just below an O horizon. This horizon is the one in which living organisms are most active and therefore is marked by the accumulation of humus. The horizon may have lost one or more of soluble salts, clay, and sesquioxides (iron and aluminum oxides).

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of change from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics caused (1) by accumulation of clay, sesquioxides, humus, or some combination of these; (2) by prismatic or blocky structure; (3) by redder or stronger colors than the A horizon; or (4) by some combination of these. Combined A and B horizons are usually called the solum, or true soil. If a soil lacks a B horizon, the A horizon alone is the solum.

C horizon.—The weathered rock material immediately beneath the solum. In most soils this material is presumed to be like that from which the overlying horizons were formed. If the material is known to be different from that in the solum, a Roman numeral precedes the letter C.

R layer.—Consolidated rock beneath the soil. The rock usually underlies a C horizon but may be immediately beneath an A or B horizon.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Leaching. The removal of soluble materials from soils or other material by percolating water.

Mottling, soil. Irregularly marked with spots of different colors that vary in number and size. Mottling in soils usually indicates poor aeration and lack of drainage. Descriptive terms are as follows: Abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent.* The size measurements are these: *fine,* less than 5 millimeters (about 0.2 inch) in diameter along the greatest dimension; *medium,* ranging from 5 millimeters to 15 millimeters (about 0.2 to 0.6 inch) in diameter along the greatest dimension; and *coarse,* more than 15 millimeters (about 0.6 inch) in diameter along the greatest dimension.

Parent material. Disintegrated and partly weathered rock from which soil has formed.

Permeability. The quality of a soil horizon that enables water or air to move through it. Terms used to describe permeability are as follows: *very slow, slow, moderately slow, moderate, moderately rapid, rapid,* and *very rapid.*

pH value. A numerical means for designating relatively weak acidity and alkalinity in soils. A pH value of 7.0 indicates precise neutrality; a higher value, alkalinity; and a lower value, acidity.

Profile, soil. A vertical section of the soil through all its horizons and extending into the parent material.

Reaction, soil. The degree of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is precisely neutral in reaction because it is neither acid nor alkaline. An acid, or "sour," soil is one that gives an acid reaction; an alkaline soil is one that is alkaline in reaction. In words, the degrees of acidity or alkalinity are expressed thus:

	pH		*pH*
Extremely acid	Below 4.5	Neutral	6.6 to 7.3
Very strongly acid	4.5 to 5.0	Mildly alkaline	7.4 to 7.8
Strongly acid	5.1 to 5.5	Moderately alkaline	7.9 to 8.4
Medium acid	5.6 to 6.0	Strongly alkaline	8.5 to 9.0
Slightly acid	6.1 to 6.5	Very strongly alkaline	9.1 and higher

Relief. The elevations or inequalities of a land surface, considered collectively.

Sand. Individual rock or mineral fragments in soils having diameters ranging from 0.05 to 2.0 millimeters. Most sand grains consist of quartz, but they may be of any mineral composition. The textural class name of any soil that contains 85 percent or more sand and not more than 10 percent clay.

Silt. Individual mineral particles in a soil that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). Soil of the silt textural class is 80 percent or more silt and less than 12 percent clay.

Soil. A natural, three-dimensional body on the earth's surface that supports plants and that has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles, less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes of separates recognized in the United States are as follows: *Very coarse sand* (2.0 to 1.0 millimeter); *coarse sand* (1.0 to 0.5 millimeter); *medium sand* (0.5 to 0.25 millimeter); *fine sand* (0.25 to 0.10 millimeter); *very fine sand* (0.10 to 0.05 millimeter); *silt* (0.05 to 0.002 millimeter); and *clay* (less than 0.002 millimeter). The separates recognized by the International Society of Soil Science are as follows: I (2.0 to 0.2 millimeter); II (0.2 to 0.02 millimeter); III (0.02 to 0.002 millimeter); IV (less than 0.002 millimeter).

Solum. The upper part of a soil profile, above the parent material, in which the processes of soil formation are active. The solum in mature soil includes the A and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the underlying material. The living roots and other plant and animal life characteristic of the soil are largely confined to the solum.

Structure, soil. The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular. Structureless* soils are (1) *single grain* (each grain by itself, as in dune sand) or (2) *massive* (the particles adhering together without any regular cleavage, as in many claypans and hardpans).

Subsoil. Technically the B horizon; roughly, the part of the solum below plow depth.

Substratum. Technically the part of the soil below the solum.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surplus runoff so that it may soak into the soil or flow slowly to a prepared outlet without harm. Terraces in fields are generally built so they can be farmed. Terraces intended mainly for drainage have a deep channel that is maintained in permanent sod.

Terrace (geological). An old alluvial plain, ordinarily flat or undulating, bordering a river, lake, or the sea. Stream terraces are frequently called second bottoms, as contrasted to flood plains, and are seldom subject to overflow. Marine terraces were deposited by the sea and are generally wide.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay.* The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Tilth, soil. The condition of the soil in relation to the growth of plants, especially soil structure. Good tilth refers to the friable state and is associated with high noncapillary porosity and stable, granular structure. A soil in poor tilth is nonfriable, hard, nonaggregated, and difficult to till.

Upland (geology). Land consisting of material unworked by water in recent geologic time and lying, in general, at a higher elevation than the alluvial plain or stream terrace. Land above the lowlands along the rivers.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1974 O - 468-184

For complete information about a mapping unit, read both the description of the mapping unit and that of the
the introduction to the section it is in for general information

Acreage and extent, table 1, page 12.
Estimated yields, table 2, page 55.

Map symbol	Mapping unit	Described on page	Capability unit		Woodland group
			Symbol	Page	Symbol
AcC	Allen cobbly fine sandy loam, 2 to 10 percent slopes	13	IVs-18	54	3x8
AgB	Allen gravelly fine sandy loam, 2 to 6 percent slopes	13	IIe-3	50	3o7
AgC	Allen gravelly fine sandy loam, 6 to 10 percent slopes	13	IIIe-10	52	3o7
AgD	Allen gravelly fine sandy loam, 10 to 15 percent slopes	13	IVs-18	54	3o7
AlB2	Allen gravelly sandy clay loam, 2 to 6 percent slopes, eroded	13	IIIe-13	53	3o7
AlD2	Allen gravelly sandy clay loam, 6 to 15 percent slopes, eroded	14	IVe-16	54	3o7
AnE	Allen association, steep	14	VIIe-22	54	3x8
AsB	Anniston loam, 2 to 6 percent slopes	15	IIe-4	51	3o7
AsD	Anniston loam, 6 to 15 percent slopes	15	IIIe-11	52	3o7
Be	Beason silt loam	15	IIIw-14	53	3w9
BhB	Bodine cherty silt loam, 2 to 6 percent slopes	16	IIs-9	52	3f8
BhD	Bodine cherty silt loam, 6 to 15 percent slopes	16	IVs-18	54	3f8
BmE	Bodine stony loam, 15 to 45 percent slopes	17	VIIs-23	54	3x8
BrC	Bremo slaty silt loam, 0 to 12 percent slopes	18	IVs-18	54	4o1
CbB	Cane fine sandy loam, 2 to 6 percent slopes	19	IIe-5	51	3o7
Cc	Chewacla and Chenneby soils	20	IIIw-15	53	1w8
Ch	Choccolocco silt loam	21	I-1	49	3o7
Cm	Clymer stony loam	21	VIIe-21	54	4x3
DcA	Decatur loam, 0 to 2 percent slopes	22	I-2	49	3o7
DdB	Decatur silt loam, 2 to 6 percent slopes	22	IIe-4	51	3o7
DeC2	Decatur silty clay loam, 4 to 10 percent slopes, eroded	22	IIIe-13	53	4c2
DeE3	Decatur silty clay loam, 10 to 25 percent slopes, severely eroded	22	VIIe-22	54	4c2
DlB	Dewey loam, 2 to 6 percent slopes	24	IIe-4	51	3o7
DmB2	Dewey clay loam, 2 to 6 percent slopes, eroded	24	IIIe-13	53	4c2
DmC2	Dewey clay loam, 6 to 10 percent slopes, eroded	24	IVe-16	54	4c2
DmE3	Dewey clay loam, 10 to 25 percent slopes, severely eroded	24	VIIe-22	54	4c2
Do	Dowellton silt loam	25	IVw-17	54	3w9
EmE	Enders-Montevallo association, steep	26	VIIe-21	54	4r3
EtD	Enders-Townley-Montevallo complex, 6 to 15 percent slopes	26	VIe-20	54	4o1
FcB	Fullerton cherty silt loam, 2 to 6 percent slopes	27	IIe-4	51	3o7
FcC	Fullerton cherty silt loam, 6 to 10 percent slopes	27	IIIe-11	52	3o7
FlD2	Fullerton cherty silt loam, 6 to 15 percent slopes, eroded	27	IVe-16	54	3o7
Gr	Grasmere silty clay	29	I-2	49	1o7

soil series to which the mapping unit belongs. In referring to a capability unit or a woodland group, read about its management. Other information is given in tables as follows:

Use of the soils in engineering, tables 5, 6, and 7, pages 66 through 81.
Town and country planning, table 8, page 84.

Map symbol	Mapping unit	Described on page	Capability unit		Woodland group
			Symbol	Page	Symbol
Gu	Guthrie silt loam	29	IVw-17	54	2w9
HoB	Holston fine sandy loam, 2 to 6 percent slopes	30	IIe-3	50	3o7
HsD	Holston gravelly fine sandy loam, 6 to 15 percent slopes	31	IIIe-10	52	3o7
Ld	Leadvale silt loam	31	IIw-8	52	3o7
Le	Lee silt loam	32	IVw-17	54	2w9
Lm	Lobelville loam	33	IIw-7	52	2w8
LoA	Locust silt loam, 0 to 2 percent slopes	33	IIw-8	52	3o7
LoB	Locust silt loam, 2 to 6 percent slopes	34	IIe-5	51	3o7
LtB	Locust cherty silt loam, 2 to 6 percent slopes	34	IIe-5	51	3o7
MaB	Masada slaty loam, 2 to 8 percent slopes	34	IIe-3	50	3o7
McA	McQueen silt loam, 0 to 2 percent slopes	35	I-2	49	3o7
McB	McQueen silt loam, 2 to 6 percent slopes	35	IIe-4	51	3o7
Me	Melvin silt loam	36	IVw-17	54	2w9
MnB	Minvale cherty silt loam, 2 to 6 percent slopes	36	IIe-3	50	3o7
MnC	Minvale cherty silt loam, 6 to 10 percent slopes	37	IIIe-10	52	3o7
MoE	Minvale-Bodine association, hilly	37	VIe-19	54	3f8
RhE	Rock land-Hector-Townley association, steep	38	VIIs-23	54	5x3
Sk	Slickens	39	-------	--	---
Sy	Sylacauga silt loam	40	IIIw-14	53	2w8
TaF	Talladega association, very steep	41	VIIe-21	54	5x3
TcD	Tallapoosa-Tatum complex, 6 to 15 percent slopes	42	VIe-20	54	4o1
ThE	Tallapoosa-Tatum association, hilly	42	VIIe-21	54	4r3
TmB	Tatum slaty loam, 2 to 6 percent slopes	43	IIe-6	52	4o1
TmC	Tatum slaty loam, 6 to 10 percent slopes	43	IIIe-12	53	4o1
To	Toccoa loams	44	IIw-7	52	1o7
TrB	Townley gravelly loam, 2 to 6 percent slopes	45	IIIe-12	53	4o1
TrC	Townley gravelly loam, 6 to 10 percent slopes	45	IVe-16	54	4o1
TsE	Townley association, steep	45	VIIe-21	54	4r2
TtC2	Townley-Tatum complex, 6 to 10 percent slopes, eroded	45	VIe-20	54	4o1
Ud	Urban land-Decatur complex	46	-------	--	---
WcA	Wickham fine sandy loam, terrace, 0 to 2 percent slopes	47	I-1	49	3o7
WcB	Wickham fine sandy loam, terrace, 2 to 6 percent slopes	47	IIe-3	50	3o7
WkB	Wickham slaty loam, 2 to 6 percent slopes	47	IIe-3	50	3o7
WkC	Wickham slaty loam, 6 to 10 percent slopes	47	IIIe-10	52	3o7

NRCS Accessibility Statement

This document is not accessible by screen-reader software. The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at 1-800-457-3642 or by e-mail at ServiceDesk-FTC@ftc.usda.gov. For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at http://offices.sc.egov.usda.gov/locator/app.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

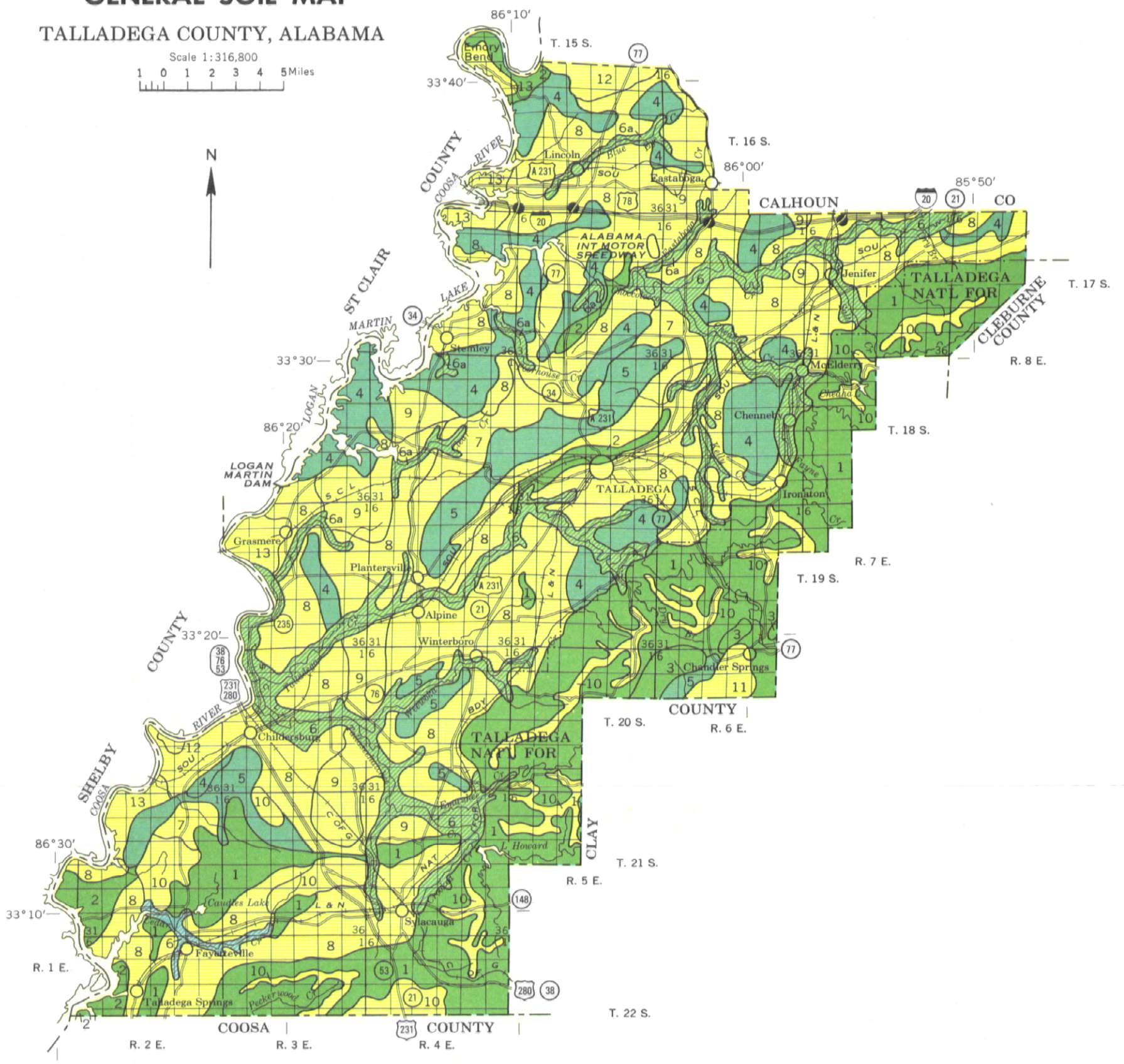
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
FOREST SERVICE
ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES
ALABAMA AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP

TALLADEGA COUNTY, ALABAMA

Scale 1:316,800

1 0 1 2 3 4 5 Miles



SOIL ASSOCIATIONS*

SOILS OF THE MOUNTAINS

1 — Tallapoosa-Tatum association: Shallow to deep, well-drained, steep, slaty, loamy soils derived from slate

2 — Townley-Enders-Montevallo association: Deep to shallow, well-drained, steep, loamy soils derived from shale

3 — Clymer association: Moderately deep, well-drained, steep, stony, loamy soils derived from sandstone or quartzite

SOILS OF THE STONY AND CHERTY HILLS

4 — Bodine-Minvale association: Deep, well-drained, steep, cherty, medium-textured soils derived from cherty limestone

5 — Allen association: Deep, well-drained, steep, cobbly and gravelly, moderately coarse textured soils derived from sandstone and shale

SOILS OF THE FLOOD PLAINS AND STREAM TERRACES

6 — Chewacla-Chenneby-McQueen association: Deep, somewhat poorly drained to well-drained, nearly level, loamy soils on first bottoms and stream terraces; subject to flooding

6a — Lobelville-Chewacla-Chenneby association: Deep, moderately well drained and somewhat poorly drained, loamy soils on first bottoms

SOILS OF THE UPLANDS

7 — Allen-Locust association: Deep, well drained and moderately well drained, loamy soils derived from sandstone, shale, and cherty limestone

8 — Decatur-Dewey-Fullerton association: Deep, well-drained, loamy soils derived from limestone

9 — Bodine-Minvale-Locust association: Deep, well drained and moderately well drained, cherty, loamy soils derived from cherty limestone

10 — Tatum-Tallapoosa-Wickham association: Deep, moderately deep, and shallow, well-drained, loamy soils derived from slate

11 — Bremo association: Shallow, well-drained, loamy soils derived from schist

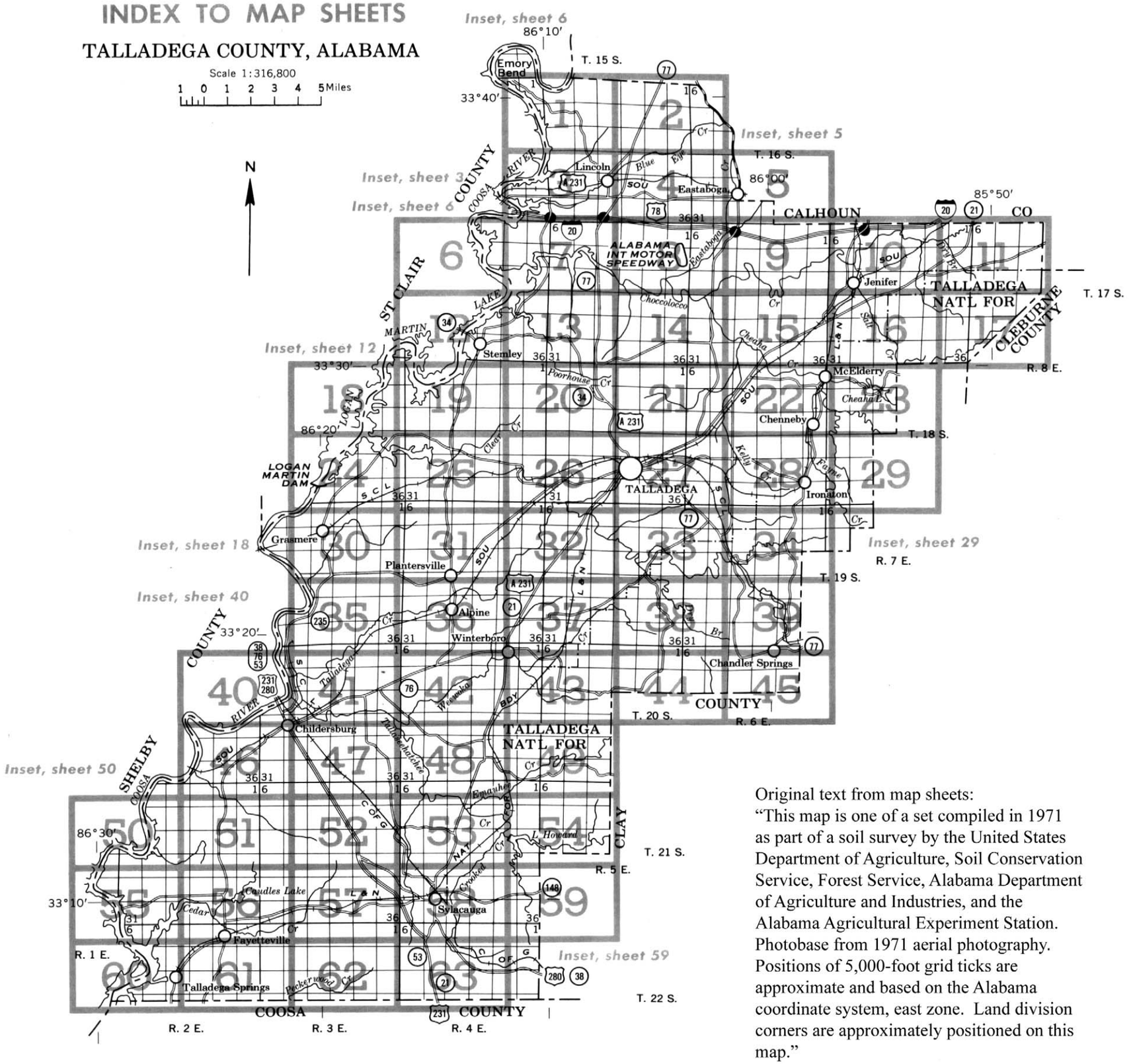
12 — Townley association: Moderately deep, well-drained, loamy soils derived from shale and sandstone

13 — Allen-Holston-Cane association: Deep, well drained and moderately well drained, loamy soils derived from sandstone, shale, and cherty limestone

*Texture in name of association refers to surface layer unless otherwise stated.

Compiled 1972

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.



Original text from map sheets:
"This map is one of a set compiled in 1971 as part of a soil survey by the United States Department of Agriculture, Soil Conservation Service, Forest Service, Alabama Department of Agriculture and Industries, and the Alabama Agricultural Experiment Station. Photobase from 1971 aerial photography. Positions of 5,000-foot grid ticks are approximate and based on the Alabama coordinate system, east zone. Land division corners are approximately positioned on this map."

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TALLADEGA COUNTY, ALABAMA

U. S. FOREST SERVICE
ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES
ALABAMA AGRICULTURAL EXPERIMENT STATION

SOIL LEGEND

The first capital letter is the initial one of the soil name. A second capital letter, A, B, C, D, E, or F, indicates the class of slope. Most symbols without a slope letter are those of nearly level soils, but some are for land types that have a considerable range of slope. The number, 2 or 3, in a symbol indicates that the soil is eroded or severely eroded.

SYMBOL	NAME
AcC	Allen cobbly fine sandy loam, 2 to 10 percent slopes
AgB	Allen gravelly fine sandy loam, 2 to 6 percent slopes
AgC	Allen gravelly fine sandy loam, 6 to 10 percent slopes
AgD	Allen gravelly fine sandy loam, 10 to 15 percent slopes
AlB2	Allen gravelly sandy clay loam, 2 to 6 percent slopes, eroded
AlD2	Allen gravelly sandy clay loam, 6 to 15 percent slopes, eroded
AnE	Allen association, steep *
AsB	Anniston loam, 2 to 6 percent slopes
AsD	Anniston loam, 6 to 15 percent slopes
Be	Beason silt loam
BhB	Bodine cherty silt loam, 2 to 6 percent slopes
BhD	Bodine cherty silt loam, 6 to 15 percent slopes
BmE	Bodine stony loam, 15 to 45 percent slopes
BrC	Bremo slaty silt loam, 0 to 12 percent slopes
CbB	Cane fine sandy loam, 2 to 6 percent slopes
Cc	Chewacla and Chenneby soils
Ch	Choccolocco silt loam
Cm	Clymer stony loam
DcA	Decatur loam, 0 to 2 percent slopes
DdB	Decatur silt loam, 2 to 6 percent slopes
DeC2	Decatur silty clay loam, 4 to 10 percent slopes, eroded
DeE3	Decatur silty clay loam, 10 to 25 percent slopes, severely eroded
DlB	Dewey loam, 2 to 6 percent slopes
DmB2	Dewey clay loam, 2 to 6 percent slopes, eroded
DmC2	Dewey clay loam, 6 to 10 percent slopes, eroded
DmE3	Dewey clay loam, 10 to 25 percent slopes, severely eroded
Do	Dowellton silt loam
EmE	Enders-Montevallo association, steep *
EtD	Enders-Townley-Montevallo complex, 6 to 15 percent slopes
FcB	Fullerton cherty silt loam, 2 to 6 percent slopes
FcC	Fullerton cherty silt loam, 6 to 10 percent slopes
FlD2	Fullerton cherty silty clay loam, 6 to 15 percent slopes, eroded
Gr	Grasmere silty clay
Gu	Guthrie silt loam
HoB	Holston fine sandy loam, 2 to 6 percent slopes
HsD	Holston gravelly fine sandy loam, 6 to 15 percent slopes
Ld	Leadvale silt loam
Le	Lee silt loam
Lm	Lobelville loam
LoA	Locust silt loam, 0 to 2 percent slopes
LoB	Locust silt loam, 2 to 6 percent slopes
LtB	Locust cherty silt loam, 2 to 6 percent slopes
MaB	Masada slaty loam, 2 to 8 percent slopes
McA	McQueen silt loam, 0 to 2 percent slopes
McB	McQueen silt loam, 2 to 6 percent slopes
Me	Melvin silt loam
MnB	Minvale cherty silt loam, 2 to 6 percent slopes
MnC	Minvale cherty silt loam, 6 to 10 percent slopes
MoE	Minvale-Bodine association, hilly *
RhE	Rock land-Hector-Townley association, steep *
Sk	Slickens
Sy	Sylacauga silt loam
TaF	Talladega association, very steep *
TcD	Tallapoosa-Tatum complex, 6 to 15 percent slopes
ThE	Tallapoosa-Tatum association, hilly *
TmB	Tatum slaty loam, 2 to 6 percent slopes
TmC	Tatum slaty loam, 6 to 10 percent slopes
To	Toccoa loam
TrB	Townley gravelly loam, 2 to 6 percent slopes
TrC	Townley gravelly loam, 6 to 10 percent slopes
TsE	Townley association, steep *
TtC2	Townley-Tatum complex, 6 to 10 percent slopes, eroded
Ud	Urban land-Decatur complex
WcA	Wickham fine sandy loam, terrace, 0 to 2 percent slopes
WcB	Wickham fine sandy loam, terrace, 2 to 6 percent slopes
WkB	Wickham slaty loam, 2 to 6 percent slopes
WkC	Wickham slaty loam, 6 to 10 percent slopes

* The composition of this mapping unit was determined by transects selected at random. The composition is not as well known as that of others in the county, but has been controlled well enough to interpret for the expected use of the soil.

CONVENTIONAL SIGNS

WORKS AND STRUCTURES

Highways and roads
- Divided
- Good motor
- Poor motor
- Trail

Highway markers
- National Interstate
- U. S.
- State or county

Railroads
- Single track
- Multiple track
- Abandoned

Bridges and crossings
- Road
- Trail
- Railroad
- Ferry (Fy)
- Ford (Ford)
- Grade
- R. R. over
- R. R. under
- Tunnel (Tunnel)

Buildings
- School
- Church

Mine and quarry

Pit, gravel

Power line

Pipeline

Cemetery

Dams

Located object

Well, oil or gas

BOUNDARIES

- National or state
- County
- Project area
- Reservation
- Land grant
- Small park, cemetery, airport
- Land division corners

DRAINAGE

Streams, double-line
- Perennial
- Intermittent

Streams, single-line
- Perennial
- Intermittent
  - Crossable with tillage implements
  - Not crossable with tillage implements
  - Unclassified

Canals and ditches (CANAL)

Lakes and ponds
- Perennial (water, w)
- Intermittent (int)

Spring

Marsh or swamp

Wet spot

Alluvial fan

Drainage end

SOIL SURVEY DATA

- Soil boundary and symbol (Dx)
- Gravel
- Stony Very stony
- Rock outcrops
- Chert fragments
- Clay spot
- Sand spot
- Gumbo or scabby spot
- Made land
- Severely eroded spot
- Blowout, wind erosion
- Gully
- Kitchen midden
- Landslide or slip
- Detrimental deposit
- Soil sample site (S)
- Limestone Rockland (U)

RELIEF

Escarpments
- Bedrock
- Other

Prominent peak

Depressions, unclassified (Large, Small)

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 1

(Joins inset A, sheet 6)

395 000 FEET

1155 000 FEET

CALHOUN COUNTY

COOSA — RIVER — ST CLAIR COUNTY

LOGAN — (COOSA — ST CLAIR COUNTY RIVER) — MARTIN — LAKE

Refuge Church

T. 16 S.

R. 4 E. | R. 5 E.

1145 000 FEET

410 000 FEET

(Joins sheet 3)

(Joins sheet 2)

N

Scale 1:20000

1 Mile

9000 Feet

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 2

(2)

N

435 000 FEET

1 155 000 FEET

CALHOUN COUNTY

R. 5 E. | R. 6 E.

T. 16 S.

CALHOUN COUNTY

BROOKS LAKE

Patton Chapel

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

(Joins sheet 1)

(Joins sheet 4)

(Joins inset, sheet 5)

1 145 000 FEET

415 000 FEET

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 3

(Joins sheet 1)

390 000 FEET

1 140 000 FEET

1 000 AND 3 000-FOOT GRID TICKS

388 000 FEET

389 000 FEET

1 133 000 FEET

1 130 000 FEET

(Joins lower left)

ST CLAIR COUNTY

COOSA RIVER

34

McA

COOSA RIVER

ST CLAIR COUNTY

19

20

21

24

25

26

29

30

31

32

33

35

36

C R Drew Jr High School

SAND & GRAVEL PIT

SOUTHERN

Lincoln

Talladega County School

Blue Eye Creek

G. P.

231

78

20

77

Gu DdB DmB2 DmC2 DmE3 DeC2 FcB FcC LtB MnB MoE LoA Be BhB BhD Lm DIB FID2 Gr Cc Do Ld To LoB AgB AlB2 AlD2 CbB MnC MnB2 Me WcB Le Ud

T. 16 S.

(Joins inset)

R. 4 E. | R. 5 E.

410 000 FEET

1 125 000 FEET

(Joins sheet 7)

(Joins sheet 4)

3

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 4

(4)

N

(Joins sheet 2)

435 000 FEET

1 140 000 FEET

Scale 1:20000 (Joins sheet 3)

1 Mile 9 000 Feet 8 000 7 000 6 000 5 000 4 000 3 000 2 000 1 000 0

T. 16 S. (Joins sheet 5)

1 125 000 FEET

415 000 FEET

(Joins sheet 8)

R. 5 E. | R. 6 E.

Pattons Chapel

St Marys Church

SOUTHERN

G. P.

(Joins inset)

440 000 FEET

1 140 000 FEET

(Joins sheet 4) T. 16 S.

CALHOUN COUNTY

Plum Springs Church

Eastaboga

Eastaboga Creek

SOUTHERN

78

CALHOUN COUNTY

R. 6 E.

(Joins sheet 2) T. 16 S.

1 145 000 FEET

1 142 000 FEET

443 000 FEET

(Joins upper left)

3 000-FOOT GRID TICKS

1 125 000 FEET

460 000 FEET

(Joins sheet 9)

5

N

1 Mile

9 000 Feet

8 000

7 000

6 000

5 000

4 000

3 000

2 000

1 000

0

1 000

Scale 1:20000

6

N

Scale 1:20000

1 Mile

9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

395 000 FEET

1 163 000 FEET

T. 15 S.

COOSA — ST CLAIR COUNTY — RIVER

35 36 2

AgB AgC AgD AnE BhB DdB DeC2 DmC2 EmE EtD Gu HoB HsD LoA Lm MnB MoE TrC WcA

water

1 154 000 FEET

400 000 FEET

R. 4 E.

(Joins sheet 1)

3 000 AND 5 000-FOOT GRID TICKS

INSET A

AgB (Joins inset B) 390 000 FEET

AlD2 AlB2 Be BhB Cc DdB DeC2 DmC2 DlB FcB FcC Gr Gu HoB Lm LoA LtB Ld MnB MoE WcA

2 3 10 11 14 15

1 120 000 FEET

T. 17 S. (Joins sheet 7)

COOSA — RIVER — ST CLAIR COUNTY

INSET B

3 000 AND 4 000-FOOT GRID TICKS

389 000 FEET

1 128 000 FEET

(Joins sheet 3)

1 125 000 FEET

385 000 FEET

(Joins upper right)

34

1 110 000 FEET

365 000 FEET

R. 4 E.

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 7

(Joins sheet 3)

390 000 FEET

1 120 000 FEET

COOSA RIVER

LOGAN MARTIN LAKE

(COOSA RIVER)

ST CLAIR COUNTY

SAND & GRAVEL PIT

CHOCCOLOCCO CREEK

(Joins sheet 6)

T. 17 S.

R. 4 E. | R. 5 E.

(Joins sheet 13)

410 000 FEET

1 110 000 FEET

(Joins sheet 8)

7

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

(Joins sheet 4)

435 000 FEET

T. 17 S. | T. 16 S.

1 120 000 FEET

(Joins sheet 9)

N

Scale 1:20000

1 Mile 9 000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

(Joins sheet 7)

1 110 000 FEET

415 000 FEET

(Joins sheet 14)

R. 5 E. | R. 6 E.

ALABAMA INTERNATIONAL MOTOR SPEEDWAY

TALLADEGA AIRPORT

SAND & GRAVEL PIT

CHOCCOLOCCO CREEK

Eastaboga Creek

Jackson Shoals

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 9

9

N

440 000 FEET

460 000 FEET

1 120 000 FEET

1 110 000 FEET

T. 17 S. | T. 16 S.

(Joins sheet 5)

(Joins sheet 8)

(Joins sheet 10)

(Joins sheet 15)

CALHOUN COUNTY

CHOCCOLOCCO CREEK

Salem School

Brick Store Chapel

G. P.

CEM

BmE R. 6 E.

Scale 1:20000

1 Mile

9000 Feet

(10)

N

485 000 FEET

CALHOUN COUNTY

CLAY PIT

CLAY PIT

SAND & GRAVEL PIT

SAND & GRAVEL PIT

SAND & GRAVEL PIT

IRON STRIP MINE PIT

CEM

G. P.

CREEK

NASHVILLE

SOUTHERN

Choccolocco

Louisville

Jenifer

Ophelia School

TALLADEGA NATIONAL FOREST

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

Scale 1:20000

(Joins sheet 9)

1 110 000 FEET

1 120 000 FEET

(Joins sheet 11)

465 000 FEET

(Joins sheet 16)

R. 7 E.

T. 17 S.

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 11

490 000 FEET

ANNISTON MUNICIPAL AIRPORT

CALHOUN COUNTY

Oak Hill Church

Sweet Rock Church

Antioch Church

Branch

TALLADEGA NATIONAL FOREST

CALHOUN COUNTY

CLEBURNE COUNTY

1 120 000 FEET

1 110 000 FEET

510 000 FEET

T. 17 S.

R. 7 E. | R. 8 E.

(Joins sheet 10)

(Joins sheet 17)

11

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

N

Scale 1:20000

1 Mile 0 9000 Feet

385 000 FEET

1 105 000 FEET

1 095 000 FEET

365 000 FEET

R. 3 E. | R. 4 E.

T. 18 S. | T. 17 S.

2000-FOOT GRID TICKS

364 000 FEET

1 098 000 FEET

1 092 000 FEET

362 000 FEET

(Joins sheet 18)

(Joins lower left)

(Joins inset)

(Joins sheet 19)

(Joins sheet 13)

ST CLAIR COUNTY — COOSA RIVER

(COOSA - ST CLAIR COUNTY RIVER) LOGAN MARTIN LAKE

STEMLEY BRIDGE

Stemley

22 23 27 26 28 34 33 36 35 4 3 2

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 13

13

N

390 000 FEET

410 000 FEET

1 105 000 FEET

1 095 000 FEET

T. 18 S. | T. 17 S.

R. 4 E. | R. 5 E. HoB

(Joins sheet 7)

(Joins sheet 12)

(Joins sheet 14)

(Joins sheet 20)

ST CLAIR COUNTY

COOSA RIVER

LOGAN MARTIN LAKE

Sycamore Church

Pleasant Grove Church

Bethel Church

CLAY PIT

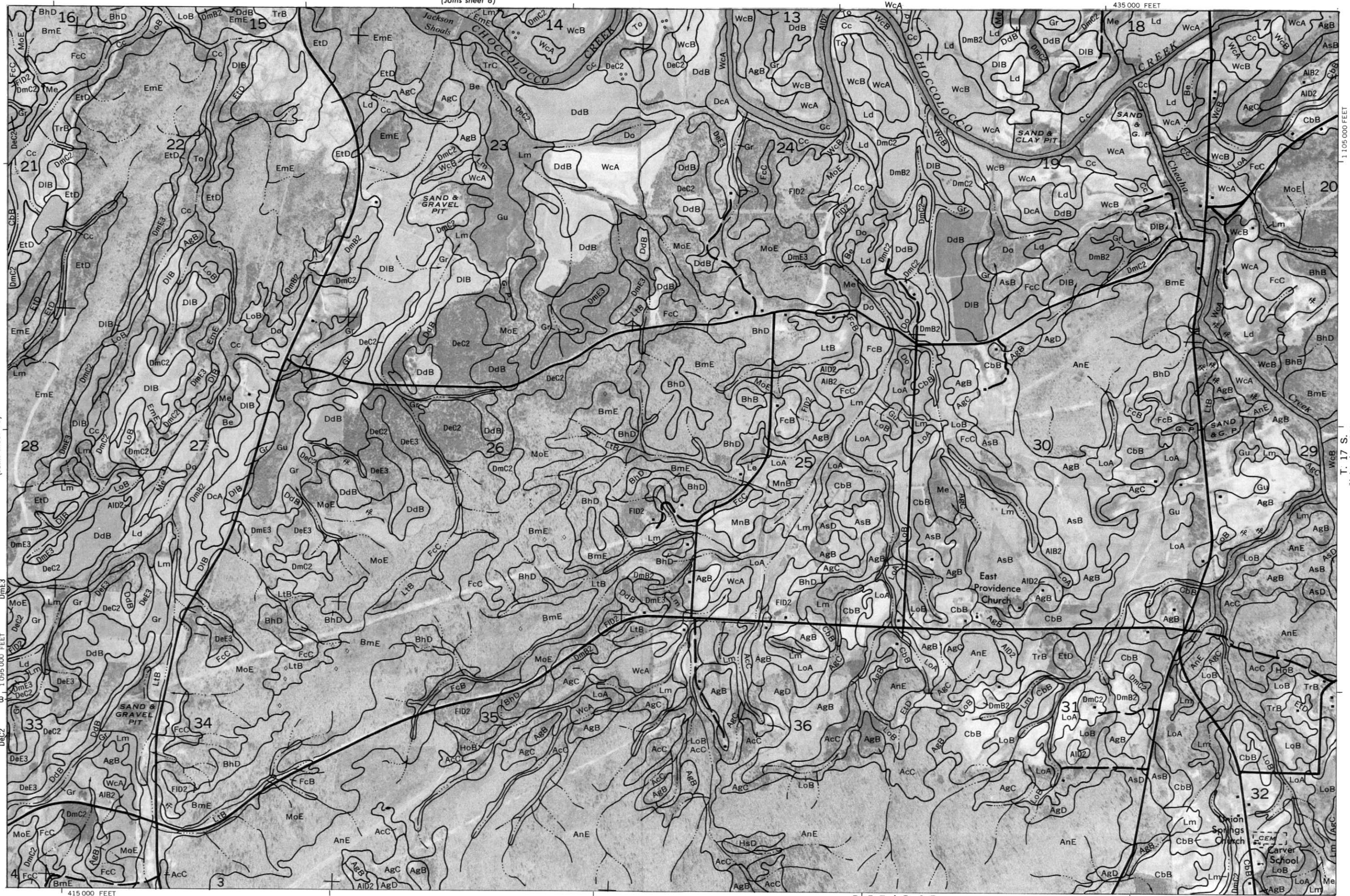
Idella School

Limbaugh Chapel

Scale 1:20000

1 Mile

9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000


(Joins sheet 8)
435 000 FEET
Jackson Shoals
CHOCCOLOCCO CREEK
SAND & GRAVEL PIT
SAND & CLAY PIT
SAND & G. P.
East Providence Church
Union Springs Church
CEM
Carver School
Cheaha Creek
16
15
14
13
17
18
22
23
24
19
20
21
28
27
26
25
30
29
33
34
35
36
31
32
4
3
1 Mile
9000 Feet
8000
7000
6000
5000
4000
3000
2000
1000
0
Scale 1:20000
(Joins sheet 13)
1 095 000 FEET
1 105 000 FEET
T. 17 S.
(Joins sheet 15)
415 000 FEET
(Joins sheet 21)
R. 5 E. | R. 6 E.

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 15

440 000 FEET

(Joins sheet 9)

15

N

1 105 000 FEET

(Joins sheet 16)

(Joins sheet 14)

T. 17 S.

Oak Grove Church

Bethlehem Church

Cheaha Creek

CHOCCOLOCCO CREEK

SOUTHERN

1 095 000 FEET

460 000 FEET

(Joins sheet 22)

R. 6 E. | R. 7 E.

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

16

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 16

N

(Joins sheet 10)

485 000 FEET

1 105 000 FEET

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1 095 000 FEET

(Joins sheet 15)

(Joins sheet 17)

T. 17 S.

TALLADEGA NATIONAL FOREST

Creek

465 000 FEET

(Joins sheet 23)

R. 7 E.

CLAY COUNTY

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 17

(Joins sheet 11)

490 000 FEET

1 105 000 FEET

(Joins sheet 16)
T. 17 S.

TALLADEGA NATIONAL FOREST

KENTUCK TOWER

CLEBURNE COUNTY

CLAY COUNTY

R. 7 E. | R. 8 E.

510 000 FEET

1 095 000 FEET

17

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

Scale 1:20000

N

Scale 1:20000

1 Mile 9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

340 000 FEET

360 000 FEET

(Joins inset, sheet 12)

1 090 000 FEET

1 055 000 FEET

1 080 000 FEET

1 045 000 FEET

335 000 FEET

345 000 FEET

T. 19 S.
(Joins sheet 30)

T. 18 S.
(Joins sheet 19)

R. 3 E.

(Joins sheet 24)

ST CLAIR COUNTY

ELLIOTT ISLAND

SHELBY COUNTY

COOSA — ST CLAIR COUNTY — RIVER

LOGAN MARTIN LAKE

(COOSA RIVER)

SEABOARD

COAST LINE

G.P.

WcA McA WcB McB DmC2 DmE3 DeC2 DeE3 DlB Lm To HoB HsD HoE AgB AgC Cc Be Le Do Ld MnB LoA Sy FcB FcC FlD2 BmE BhB BhD LtB MoE

5 6 8 11 12 13 14 17 18 23 24 1

(Joins sheet 12)

19

365 000 FEET

1 090 000 FEET

(COOSA — ST CLAIR — COUNTY — RIVER)

LOGAN MARTIN LAKE

(Joins sheet 18)

T. 18 S.

R. 3 E. | R. 4 E.

(Joins sheet 25)

385 000 FEET

(Joins sheet 20)

1 080 000 FEET

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

(Joins sheet 13)

N

410 000 FEET

1 090 000 FEET

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1 080 000 FEET

390 000 FEET

(Joins sheet 19)

(Joins sheet 21)

(Joins sheet 26)

R. 4 E. | R. 5 E.

T. 18 S.

Talladega County Training School

Wesley Chapel

Poorhouse Creek

Imanuel Church

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

(Joins sheet 14)

415 000 FEET

1 090 000 FEET

COOSA RIVER ORDNANCE WORKS

T. 18 S.

R. 5 E. | R. 6 E.

(Joins sheet 20)

(Joins sheet 27)

435 000 FEET

1 075 000 FEET

(Joins sheet 22)

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

21

N


N
(Joins sheet 15)
460 000 FEET
T. 18 S. | T. 17 S.
1 090 000 FEET
1 Mile
9 000 Feet
8 000
7 000
6 000
5 000
4 000
3 000
2 000
1 000
0
1000
Scale 1:20000
(Joins sheet 21)
(Joins sheet 23)
Kelley Springs Church
McElderry
Chenneby
TALLADEGA NATIONAL FOREST
Cheaha Creek
Keith Creek
Faune Creek
SOUTHERN
NASHVILLE
1 075 000 FEET
440 000 FEET
(Joins sheet 28)
R. 6 E. | R. 7 E.

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 23

(Joins sheet 16)

465 000 FEET

T. 18 S. | T. 17 S.

1 090 000 FEET

CLAY COUNTY

CHEAHA LAKE

TALLADEGA NATIONAL FOREST

CLAY COUNTY

(Joins sheet 22)

R. 7 E.

(Joins sheet 29)

485 000 FEET

1 075 000 FEET

23

N

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

¼ ½ ¾

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 24

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 25

(Joins sheet 19)

365 000 FEET

1 075 000 FEET

LOGAN MARTIN LAKE

Hazzibah Church

Jonesview School

COAST LINE

SEABOARD

(Joins sheet 24)

(Joins sheet 26)

(Joins sheet 31)

T. 19 S. | T. 18 S.

R. 3 E. | R. 4 E.

1 060 000 FEET

385 000 FEET

25

N

1 Mile

9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

Scale 1:20000

1 ¼ ½ ¾ 0 ¾ ½ ¼ 1

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 26

(Joins sheet 20)

410 000 FEET

1 075 000 FEET

N

1 Mile

9 000 Feet

8 000

7 000

6 000

5 000

4 000

3 000

2 000

1 000

0

1 000

Scale 1:20000

(Joins sheet 25)

Concord Church

TALLADEGA (county seat)

Talladega State School For the Deaf & Blind

SEABOARD COAST LINE

SOUTHERN

NASHVILLE AND LOUISVILLE

TALLADEGA CREEK

23 24 19 20 21 26 25 30 29 28 35 36 31 32 33 2 1 6 5 4

T. 19 S. | T. 18 S.

(Joins sheet 27)

390 000 FEET

R. 4 E. | R. 5 E.

(Joins sheet 32)

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 27

(Joins sheet 21)

415 000 FEET

1 075 000 FEET

(Joins sheet 26)

(Joins sheet 28)

1 060 000 FEET

435 000 FEET

(Joins sheet 33)

T. 19 S. | T. 18 S.

R. 5 E. | R. 6 E.

N

Scale 1:20000

1 Mile

9000 Feet

East Side Elem School

Central Elem School

West Side High School

Talladega College

TALLADEGA HOSPITAL

U S Post Office

Courthouse

Alabama School For Deaf

Dixon Jr High School

Talladega High School

Alabama School For Blind

TALLADEGA (county seat)

Graham Elem School

Mt Olive Church

PINE HILL MEM CEM

ELLIOTTS LAKE

SOUTHERN

SEABOARD

COAST LINE

LOUISVILLE AND NASHVILLE

G.P.

(Joins sheet 22)

460 000 FEET

N

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1 070 000 FEET

(Joins sheet 27)

(Joins sheet 29)

1 060 000 FEET

440 000 FEET

(Joins sheet 34)

T. 19 S. | T. 18 S.

R. 6 E. | R. 7 E.

TALLADEGA NATIONAL FOREST

Mt Zion Church

Ironaton

STRIP MINE

IRON STRIP MINE PIT

Louisville and Nashville

Kelly Creek

Fayne Creek

water

N

465 000 FEET

(Joins sheet 23)

(Joins lower left)

TALLADEGA NATIONAL FOREST

CLAY COUNTY

(Joins sheet 34)

(Joins sheet 28)

1 070 000 FEET

1 055 000 FEET

1 050 000 FEET

1 060 000 FEET

T. 19 S. | T. 18 S.

R. 7 E. (Joins inset, upper right)

R. 7 E.

470 000 FEET

485 000 FEET

1 Mile

Scale 1:20000

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 30

(Joins sheet 24)

N

Scale 1:20000

1 Mile 9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

ST CLAIR COUNTY — COOSA RIVER

SHELBY COUNTY — COOSA RIVER

SEABOARD

COAST LINE

Grasmere

Kings Chapel

Laniers

Cartersville Church

SAND & GRAVEL PIT

ALABAMA ORDNANCE WORKS

360 000 FEET

340 000 FEET

1 055 000 FEET

1 045 000 FEET

R. 3 E.

T. 19 S.

(Joins inset, sheet 18)

(Joins sheet 35)

(Joins sheet 31)

(Joins sheet 25)

(Joins sheet 30)

(Joins sheet 32)

(Joins sheet 36)

Gr 365 000 FEET

1 055 000 FEET

1 045 000 FEET

385 000 FEET

T. 19 S.

R. 3 E. | R. 4 E.

Hannah Mallory School

Bethel Church

G. P.

Plantersville

Southern Ry

31

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 32

(Joins sheet 26)

410 000 FEET

N

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

(Joins sheet 31)

1 055 000 FEET

1 045 000 FEET

390 000 FEET

(Joins sheet 33)

T. 19 S.

R. 4 E. | R. 5 E.

(Joins sheet 37)

Bemiston

TALLADEGA

SOUTHERN

CREEK

LOUISVILLE & NASHVILLE

IRON STRIP MINE PIT

231

21

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 33

N

(Joins sheet 28)

460 000 FEET

TALLADEGA NATIONAL FOREST

CLAY COUNTY

CLAY COUNTY

SEABOARD COAST LINE

TALLADEGA CREEK

G. P.

1 Mile

9 000 Feet

8 000

7 000

6 000

5 000

4 000

3 000

2 000

1 000

0

1 000

Scale 1:20000

(Joins sheet 33)

1 055 000 FEET

(Joins inset, sheet 29)

1 045 000 FEET

440 000 FEET

(Joins sheet 39)

T. 19 S.

R. 6 E. | R. 7 E.

35

(Joins sheet 30)

340 000 FEET

1 040 000 FEET

N

(Joins sheet 36)

(Joins inset, sheet 40)

T. 20 S. | T. 19 S.

R. 3 E.

(Joins sheet 41)

360 000 FEET

1 030 000 FEET

1 Mile

9000 Feet

Scale 1:20000

N

(Joins sheet 31)

385 000 FEET

1 040 000 FEET

Scale 1:20000 (Joins sheet 35)

1 Mile

9 000 Feet

8 000

7 000

6 000

5 000

4 000

3000

2000

1000

0

1 030 000 FEET

365 000 FEET

R. 3 E. | R. 4 E.

(Joins sheet 42)

(Joins sheet 37)

T. 20 S. | T. 19 S.

Nottingham School

Trinity Church

Alpine

CREEK

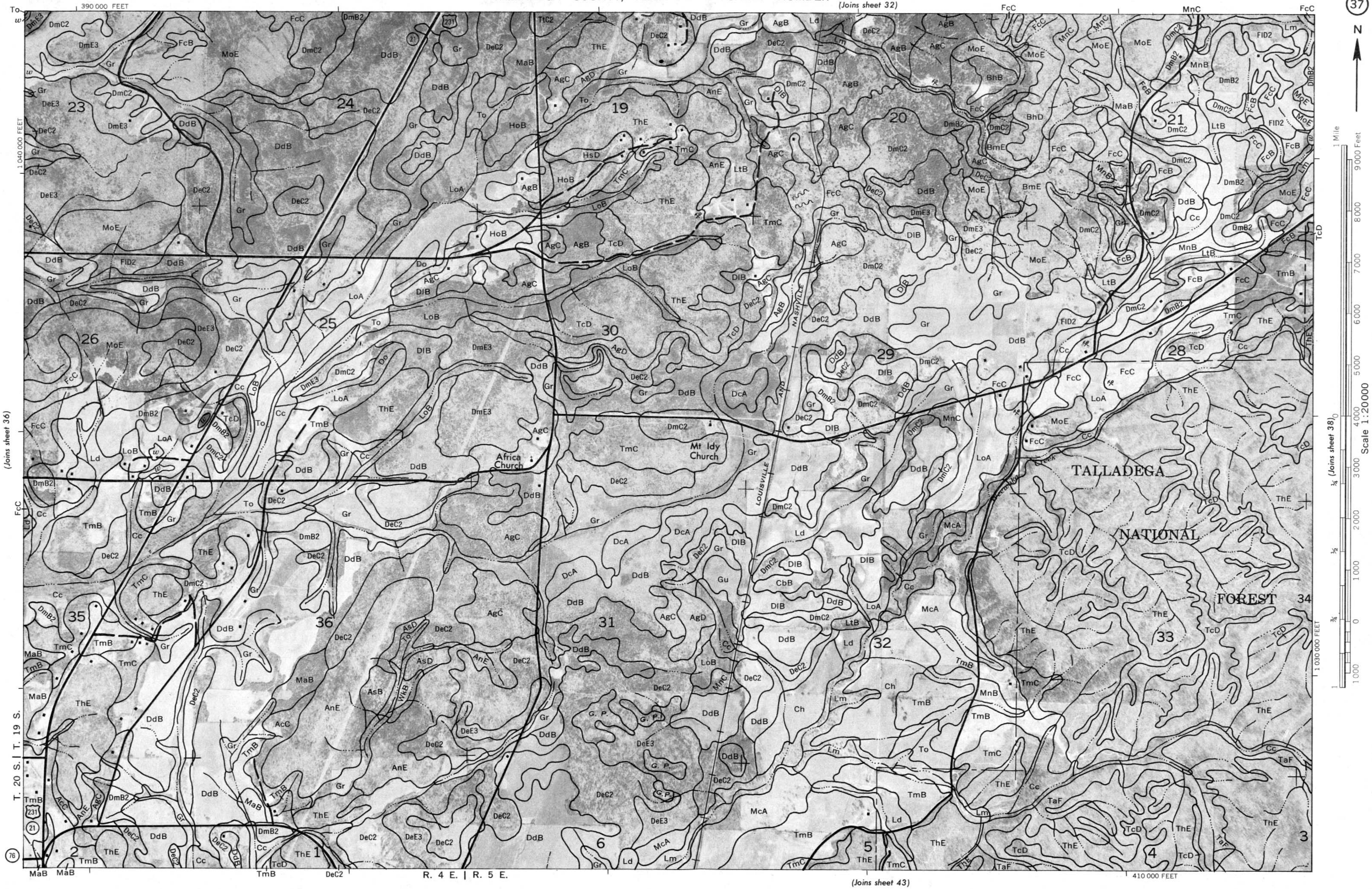
TALLADEGA

SOUTHERN

G. P.

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 1 2 3 4 5 6

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 37



N

(Joins sheet 33)

435 000 FEET

1 040 000 FEET

1 030 000 FEET

415 000 FEET

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

(Joins sheet 37)

(Joins sheet 44)

(Joins sheet 39)

R. 5 E. | R. 6 E.

T. 20 S. | T. 19 S.

TALLADEGA NATIONAL FOREST

Prui Branch

MnC MnB DmB2 DmC2 FcB FcC MoE Lm Sy Cc WkB TcD ThE TaF TmC TmB FlD2

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 39

(Joins sheet 34)

(Joins sheet 38)

(Joins sheet 45)

440 000 FEET

460 000 FEET

1 040 000 FEET

1 030 000 FEET

T. 20 S. | T. 19 S.

R. 6 E.

TALLADEGA

NATIONAL

FOREST

SEABOARD COAST LINE

TALLADEGA CREEK

CREEK

TALLADEGA COUNTY — CLAY COUNTY

20 21 22 23 29 28 27 26 32 33 34 35 5 4 3 2

ThE TcD TaF Cc MaB TmC Cm AnE AgC MaB BrC To WkB

39

N

1 Mile

9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

Scale 1:20000

(40)

N

Scale 1:20000

1 Mile 0 1 000 2 000 3 000 4 000 5 000 6 000 7 000 8 000 9 000 Feet

335 000 FEET

1 025 000 FEET

1 035 000 FEET

1 030 000 FEET

1 015 000 FEET

339 000 FEET

337 000 FEET

315 000 FEET

(Joins inset)

(Joins sheet 35)

(Joins sheet 41)

(Joins sheet 46)

(Joins upper right)

T. 20 S. | T. 19 S.

R. 3 E.

R. 2 E. | R. 3 E.

2000 AND 5000-FOOT GRID TICKS

COOSA RIVER

SHELBY COUNTY

SEABOARD COAST LINE

SEWAGE LAGOON

CENTRAL OF GEORGIA

G.P.

Ud

Sy

McA

To

Cc

WcA

WcB

AgB

AgC

DmB2

DmC2

DmE3

MoE

FcC

DlB

Ch

Ld

LoA

5

6

8

17

18

19

20

21

22

24

30

31

32

29

231

280

235

76

53

38

(Joins sheet 35)

340 000 FEET

1 025 000 FEET

ALABAMA ORDNANCE WORKS

SEWAGE LAGOON

TALLADEGA CREEK

SHELBY COUNTY

COOSA RIVER

Tallaseehatchee Creek

Tallaseehatchee Church

KYMULGA CAVE

Mt Olive Church

SEABOARD COAST LINE

CENTRAL OF GEORGIA

SOUTHERN

R. 3 E.

T. 20 S.

(Joins sheet 40)

(Joins sheet 47)

360 000 FEET

1 015 000 FEET

(Joins sheet 42)

41

N

1 Mile

9 000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

Scale 1:20000

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 42

N

Scale 1:20000

1 Mile 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 Feet

(Joins sheet 41)

(Joins sheet 36)

385 000 FEET

1 029 000 FEET

1 015 000 FEET

365 000 FEET

(Joins sheet 43)

(Joins sheet 48)

R. 3 E. | R. 4 E.

T. 20 S.

Riser Chapel

Papertown Church

Weewoka Creek

TALLADEGA NATIONAL FOREST

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 43

(Joins sheet 37)

390 000 FEET

1 025 000 FEET

1 015 000 FEET

410 000 FEET

(Joins sheet 42) T. 20 S.

(Joins sheet 44)

(Joins sheet 49)

R. 4 E. | R. 5 E.

Winterboro

Weewoka Creek

NASHVILLE AND LOUISVILLE

TALLADEGA NATIONAL FOREST

CLAY COUNTY

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

N

N

(Joins sheet 38)

435 000 FEET

1 025 000 FEET

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

4000

1000

Scale 1:20000

(Joins sheet 43)

1 015 000 FEET

415 000 FEET

T. 20 S.

(Joins sheet 45)

TALLADEGA NATIONAL FOREST

HORN TOWER

CLAY COUNTY

R. 5 E. | R. 6 E.

1 2 3 4 5 6 7 8 9 10 11 12

ThE TcD TaF Cc TmC AcC AnE Cm MaB HsD AgB AgC BrC HoB TmB

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 45

45

N

440 000 FEET

1 025 000 FEET

R. 6 E.

T. 20 S.

(Joins sheet 39)

(Joins sheet 44)

TALLADEGA NATIONAL FOREST

Horns Chapel

Chandler Springs

Chandler Springs School

CLAY COUNTY

CLAY COUNTY

1 010 000 FEET

460 000 FEET

1 Mile

9000 Feet

Scale 1:20000

(Joins sheet 40)

N

1 Mile

9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0 1000

Scale 1:20000

335 000 FEET

1010 000 FEET

995 000 FEET

315 000 FEET

SHELBY COUNTY — COOSA RIVER

COOSA RIVER — SHELBY COUNTY

SOUTHERN

CHILDERSBURG

SEWAGE LAGOON

ROCK QUARRY

water

21 22 23 24 19 20 26 27 25 30 29 34 35 36 31 32 4 3 2 1 6 5

(Joins inset, sheet 50)

(Joins sheet 51)

(Joins sheet 47)

T. 21 S. | T. 20 S.

R. 2 E. | R. 3 E.

(Joins sheet 41)

N

340 000 FEET

1 010 000 FEET

CHILDERSBURG

Bon Air

A H Watwood School

N F Nunnelley State Trade School

Friendship Church

Mt View Church

Pleasant Hill Church

ROCK QUARRY

CENTRAL OF GEORGIA

T. 21 S. | T. 20 S.

R. 3 E.

360 000 FEET

1 995 000 FEET

(Joins sheet 46)

(Joins sheet 48)

(Joins sheet 52)

Scale 1:20000

1 Mile

9000 Feet

(Joins sheet 42)

N

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

2000

3000

(Joins sheet 47)

385 000 FEET

1010 000 FEET

995 000 FEET

365 000 FEET

R. 3 E. | R. 4 E.

T. 21 S. | T. 20 S

(Joins sheet 49)

(Joins sheet 53)

Papertown Church

Talladega Church

TALLADEGA NATIONAL FOREST

Talaseehatchee Creek

Louisville and Nashville

Louisville and Nashville

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 1 2 3 4 5 6

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 49

(Joins sheet 43)

(Joins sheet 48)

(Joins sheet 54)

390 000 FEET

410 000 FEET

1 010 000 FEET

995 000 FEET

T. 21 S. | T. 20 S.

R. 4 E. | R. 5 E.

TALLADEGA NATIONAL FOREST

CLAY COUNTY

LOUISVILLE AND NASHVILLE

ROCK QUARRY

Emuthee Creek

G.P.

49

N

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

N

Scale 1:20000

1 Mile

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 Feet

314 000 FEET

1 000 000 FEET

995 000 FEET

309 000 FEET

310 000 FEET

995 000 FEET

980 000 FEET

295 000 FEET

COOSA — RIVER

SHELBY COUNTY

T. 21 S. | T. 20 S.

(Joins sheet 46)

(Joins upper right)

R. 2 E.

(Joins inset)

(Joins sheet 51)

R. 1 E. | R. 2 E.

(Joins sheet 55)

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 51

51

N

315 000 FEET

995 000 FEET

(Joins sheet 46)

(Joins sheet 50)

T. 21 S.

R. 2 E. | R. 3 E.

335 000 FEET

980 000 FEET

(Joins sheet 56)

(Joins sheet 52)

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

Scale 1:20000

Mt Sharon Church

N

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000 (Joins sheet 51)

3000

2000

1000

0

1000

(Joins sheet 47)

360 000 FEET

980 000 FEET

340 000 FEET

(Joins sheet 57)

R. 3 E.

T. 21 S. (Joins sheet 53)

KAHATCHEE TOWER

CENTRAL OF GEORGIA

Oak Grove

(Joins sheet 48)

53

N

365 000 FEET

990 000 FEET

980 000 FEET

385 000 FEET

(Joins sheet 52) T. 21 S.

(Joins sheet 54)

(Joins sheet 58)

R. 3 E. | R. 4 E.

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

Odena Church

Mignon

Oldfield

Harpers Springs Church

TALLADEGA NATIONAL FOREST

Tallaseehatchee Creek

Emauhee Creek

CENTRAL

GEORGIA

LOUISVILLE AND NASHVILLE

STRIP MINE

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 54

(Joins sheet 50)

55

290 000 FEET

975 000 FEET

SHELBY COUNTY

COOSA RIVER

LAY LAKE

Russell Chapel

Cedar Creek

T. 22 S. | T. 21 S.

R. 1 E. | R. 2 E.

965 000 FEET

310 000 FEET

(Joins sheet 60)

(Joins sheet 56)

N

Scale 1:20000

1 Mile

9000 Feet

56

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 56

N

(Joins sheet 51)

335 000 FEET

975 000 FEET

965 000 FEET

315 000 FEET

Scale 1:20000

1 Mile

9 000 Feet

8 000

7 000

6 000

5 000

4 000

3 000

2 000

1 000

0

1000

(Joins sheet 55)

(Joins sheet 57)

(Joins sheet 61)

CAUDLES LAKE

Cedar Creek

Fayetteville

LOUISVILLE AND NASHVILLE

T 22 S. | T. 21 S.

R. 2 E. | R. 3 E.

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 57

(Joins sheet 52)

340 000 FEET

975 000 FEET

965 000 FEET

360 000 FEET

T. 22 S. | T. 21 S.

R. 3 E.

(Joins sheet 56)

(Joins sheet 62)

(Joins sheet 58)

57

N

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

(Joins sheet 53)

N

385 000 FEET

Scale 1:20000

1 Mile 9000 Feet 8000 7000 6000 5000 4000 3000 2000 1000 0

¼ ½ ¾ 0 1000

(Joins sheet 571)

975 000 FEET

965 000 FEET

365 000 FEET

R. 3 E. | R. 4 E.

(Joins sheet 63)

(Joins sheet 59)

T. 22 S. | T. 21 S.

Mignon

B B Comer School

East Highland High School

Mountainview Community Center

Salvation School

SYLACAUGA HOSPITAL

SYLACAUGA

TALLADEGA NATIONAL FOREST

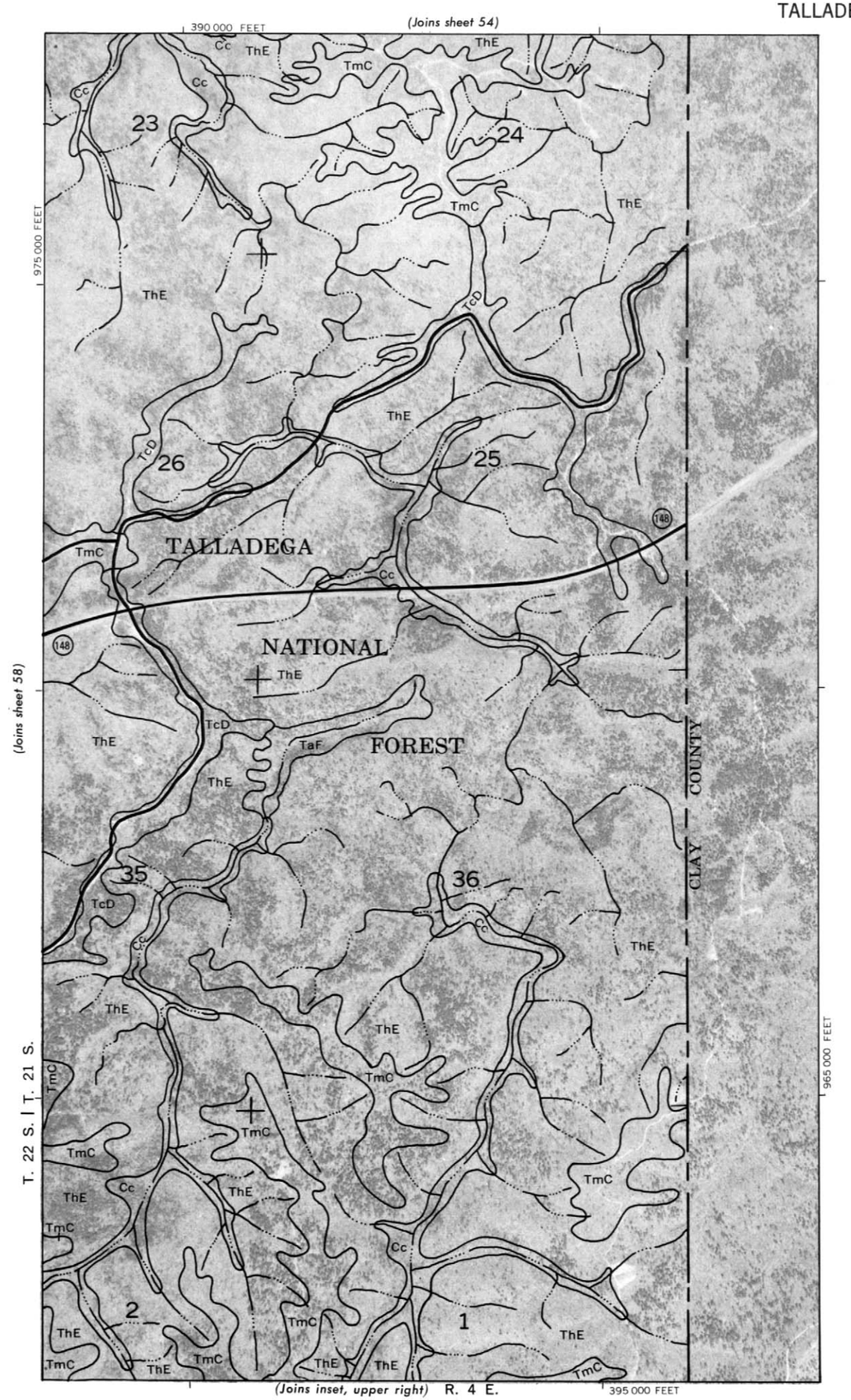
CLAY PIT

MARBLE QUARRY

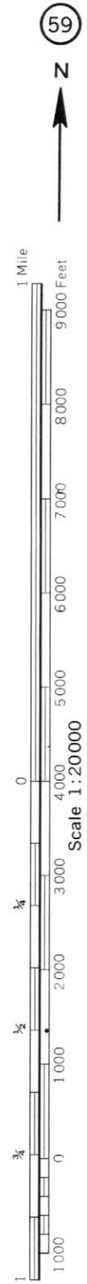
CENTRAL OF GEORGIA

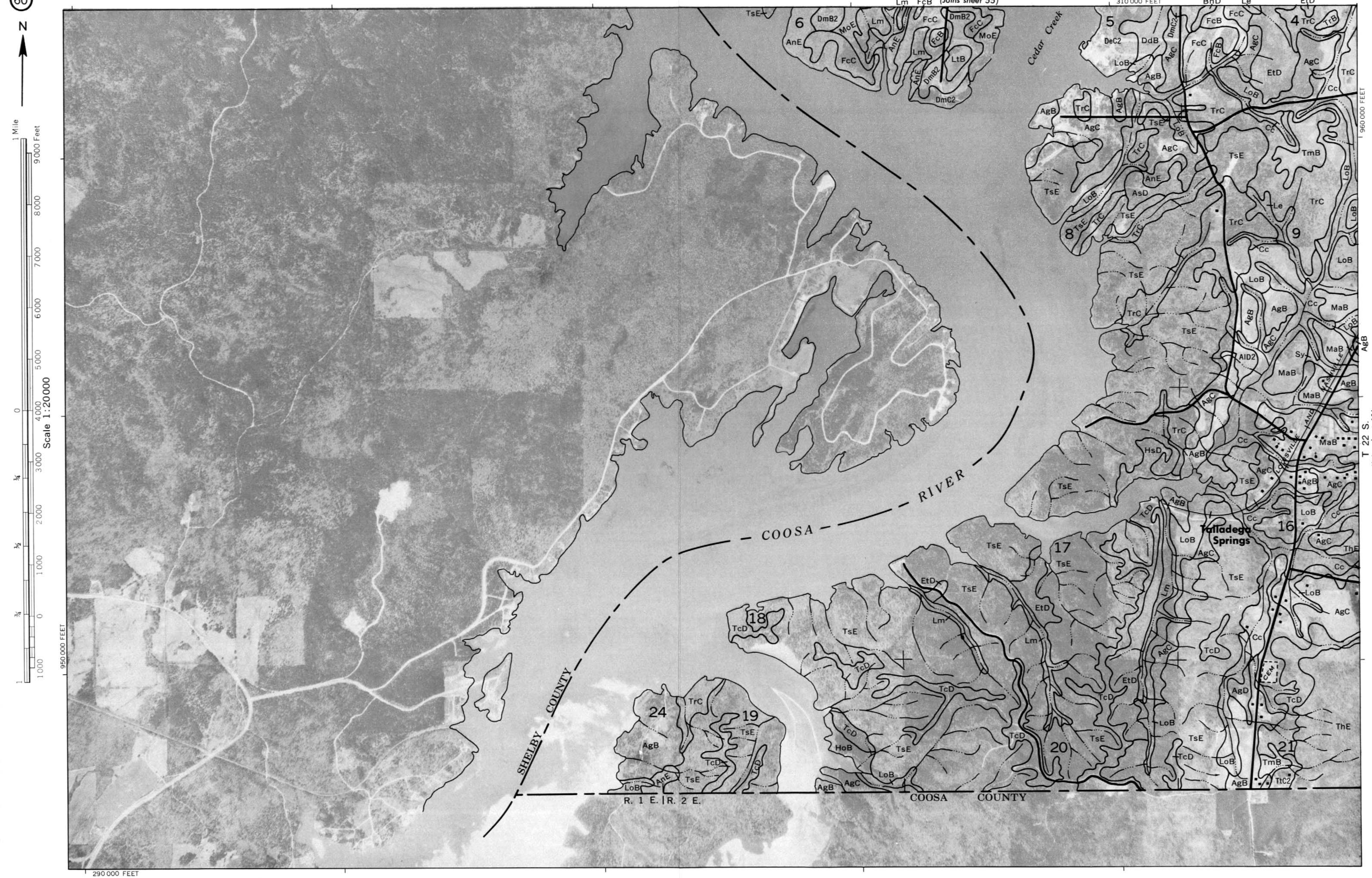
LOUISVILLE AND NASHVILLE

Crooked Creek


390 000 FEET
(Joins sheet 54)
975 000 FEET
(Joins sheet 58)
T. 22 S. | T. 21 S.
965 000 FEET
(Joins inset, upper right) R. 4 E.
395 000 FEET
TALLADEGA
NATIONAL
FOREST
CLAY COUNTY
23
24
25
26
35
36
2
1
ThE
TmC
Cc
TcD
TaF


390 000 FEET
(Joins lower left)
960 000 FEET
(Joins sheet 63)
T 22 S.
950 000 FEET
395 000 FEET
TALLADEGA
NATIONAL
FOREST
CLAY COUNTY
COOSA COUNTY
R. 4 E.
CENTRAL OF GEORGIA R.R.
11
12
13
14
23
24
1
2
ThE
TmC
Cc
TcD
MaB
WkC
WkB
TmB


59
N
1 Mile
9000 Feet
8000
7000
6000
5000
4000
3000
2000
1000
0
Scale 1:20000



(Joins sheet 55)
(Joins sheet 61)
N
Scale 1:20000
1 Mile
9000 Feet
310 000 FEET
960 000 FEET
950 000 FEET
290 000 FEET
COOSA RIVER
Cedar Creek
SHELBY COUNTY
COOSA COUNTY
R. 1 E. | R. 2 E.
T. 22 S.
Talladega Springs
CEM

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 61

61

315 000 FEET

960 000 FEET

(Joins sheet 56)

R. 2 E. | R. 3 E.

N

Talladega Springs

NASHVILLE AND LOUISVILLE

COOSA COUNTY

335 000 FEET

(Joins sheet 60) T. 22 S.

(Joins sheet 62)

1 Mile

9000 Feet

950 000 FEET

Scale 1:20000

TALLADEGA COUNTY ALABAMA — SHEET NUMBER 62

62

N

(Joins sheet 57)

R. 3 E.

T. 22 S.

(Joins sheet 63)

360 000 FEET

340 000 FEET

960 000 FEET

950 000 FEET

Scale 1:20000

1 Mile

9000 Feet

8000

7000

6000

5000

4000

3000

2000

1000

0

1000

MARBLE QUARRY

Bluff Springs Church

Mountain Springs Church

Peckerwood Creek

LAKE TATE

COOSA COUNTY

ThE DdB DeC2 FcC Ch Gr MoE DmE3 Ld DmC2 LoA MnB DlB WkB WkC Cc TcD FcB McA MaB TmC TmB TtC2 Me

TALLADEGA COUNTY, ALABAMA — SHEET NUMBER 63

63

365 000 FEET

960 000 FEET

(Joins sheet 58)

N

TALLADEGA NATIONAL FOREST

CENTRAL OF GEORGIA

Crooked Creek

COOSA COUNTY

(Joins sheet 62) T 22 S.

R. 3 E. R. 4 E.

950 000 FEET

385 000 FEET

(Joins sheet 59)

1 Mile

Scale 1:20000